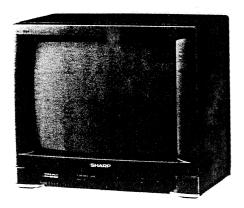
SHARP

SERVICE MANUAL

S33S414BN1///



MULTI 21 SYSTEM COLOUR TELEVISION Chassis No. 14BM

14BN1 14BN14 MODELS 14BN1A

In the interests of user-safety (Required by safety regulations in some countries) the set should be restored to its original condition and only parts identical to those specified should be used.

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WARNING

The chassis in this receiver is partially hot. Use an isolation transformer between the line cord plug and power receptacle, when servicing this chassis.

To prevent electric shock, do not remove cover. No user — serviceable parts inside. Refer servicing to qualified service personnel.

SHARP CORPORATION

ELECTRICAL SPECIFICATIONS

Power Input	. 110 V~2	40 V A	C, 50/	60 Hz
Power Consumption				62 W
Convergence	Self C	onver	ging S	ystem
Focus Bi-Potenti	al, Uni-Pote	ntial l	Electro	static
Sweep Deflection			Mag	netic
Intermediate Frequencies				
Picture IF Carrier			38.9	MHz
Sound IF Carrier				
6.5MHz			32.4	MHz
6.0MHz				MHz
5.5MHz				MHz
4.5MHz				MHz
Colour Sub-Carrier		 .	J-7	
PAL/NTSC			24.47	BALL.
PAUNISC	· · · · · · · · · · · · · · · · · · ·		34.47	N#11-
SECAM				
NTSC				MHz
Audio Power Output Rating		1	.5 W (I	viax.)
Speaker				
Size				
Voice Coil Impedance		. 32	Ω at 4	00 Hz
Aerial Input Impedance		75 Ω (Jnbala	inced
Receiving Channels				
PAL-B/G, SECAM-B/G				
VHF		E2	thru	E12
UHF			thru	69
CATV			thru	S3 .
CAIV		Mi	thru	M10
		54	thru	
		34	umu	320
PAL-D/K, SECAM-D/K				
VHF			thru	
UHF		21	thru	69
● PAL-I				
VHF	(IRELAND):	В	thru	J
UHF	(U.K., H.K.):	21	thru	69
NTSC-M				
VHF	(US):	2	thru	13
••••	(JAPAN):	1	thru	12
UHF		14		79
Off	(JAPAN):	13	thru	62
			thru	A-1.
CATV				•
		Α	thru	W
Receiving Frequency				
	8.25 MHz t	heu '	295.25	MHz
			293.23 863.25	
UHF 47	1.25 MHz t	iru i	005.25	WINZ

2

Specifications are subject to change without prior notice.

IMPORTANT SERVICE SAFETY PRECAUTION

■ Service work should be performed only by qualified service technicians who are thoroughly familiar with all safety checks and servicing guidelines which follow:

WARNING

- 1. For continued safety, no modification of any circuit should be attempted.
- 2. Disconnect AC power before servicing.
- 3. Semiconductor heat sinks are potential shock hazards when the chassis is operating.
- 4. The chassis in this receiver has two ground systems which are separated by insulation material. The non-isolated (hot) ground system is for the +B voltage regulator circuit and the horizontal output circuit. The isolated ground system is for the low +B DC voltages and the secondary cicuit of the high voltage transformer.

To prevent electrical shock use an isolation transformer between the line cord and power receptacle, when servicing this chassis.

SERVICING OF HIGH VOLTAGE SYSTEM AND PICTURE TUBE

When servicing the high voltage system, remove the static charge by connecting a 10k ohm resistor in series with an insulated wire (such as a test probe) between the picture tube ground and the anode lead. (AC line cord should be disconnected from AC outlet.)

- Picture tube in this receiver employs integral implosion protection.
- Replace with tube of the same type number for continued safety.
- 3. Do not lift picture tube by the neck.

4.50

 Handle the picture tube only when wearing shatterproof goggles and after discharging the high voltage anode completely.

X-RADIATION AND HIGH VOLTAGE LIMITS

- 1. Be sure all service personnel are aware of the procedures and instructions covering X-radiation. The only potential source of X-ray in current solid state TV receivers is the picture tube. However, the picture tube does not emit measurable X-Ray radiation if the high voltage is as specified in the "High Voltage Check" instructions. It is only when high voltage is excessive that X-radiation is capable of penetrating the shell of the picture tube including the lead in glass material. The important precaution is to keep the high voltage below the maximum level specified.
- It is essential that servicemen are available at all times an accurate high voltage meter. The calibration of this meter should be checked periodically.
- High voltage should always be kept at the rated value —no higher. Operation at higher voltages may cause a failure of the picture tube or high voltage circuitry and, also, under certain conditions, may produce radiation in excess of desirable levels.
- 4. When the high voltage regulator is operating properly there is no possibility of an X-radiation problem. Every time a color chassis is serviced, the brightness should be tested while monitoring the high voltage with a meter to be certain that the high voltage does not exceed the specified value and that it is regulating correctly.
- Do not use a picture tube other than that specified or make unrecommended circuit modifications to the high voltage circuitry.
- 6. When trouble shooting and taking test measurements on a receiver with excessive high voltage, avoid being unnecessarily close to the receiver. Do not operate the receiver longer than is necessary to locate the cause of excessive voltage.

IMPORTANT SERVICE SAFETY PRECAUTION (Continued)

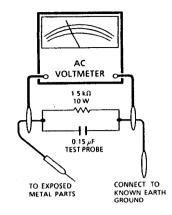
BEFORE RETURNING THE RECEIVER (Fire & Shock Hazard)

Before returning the receiver to the user, perform the following safety checks.

- Inspect all lead dress to make certain that leads are not pinched or that hardware is not lodged between the chassis and other metal parts in the receiver.
- Inspect all protective devices such as nonmetallic control knobs, insulating materials, cabinet backs, adjustment and compartment covers or shields, isolation resistor-capacity networks, mechanical insulators, etc.
- 3. To be sure that no shock hazard exists, check for leakage current in the following manner.
- Plug the AC cord directly into a 120 volt AC outlet, (Do not use an isolation transformer for this test).
- Using to clip leads, connect a $1.5\,\mathrm{k}\Omega$, $10\,\mathrm{watt}$ resistor paralleled by a $0.15\,\mu\mathrm{F}$ capacitor in series with all exposed metal cabinet parts and a known earth ground, such as electrical conduit or electrical ground connected to earth ground.
- Use an AC voltmeter having with 5000 ohm per volt, or higher, sensitivity to measure the AC voltage drop across the resistor.
- Connect the resistor connection to all exposed metal parts having a return to the chassis (antenna, metal cabinet, screw heads, knobs and control shafts, escutcheon, etc.) and measure the AC voltage drop across the resistor.

All check must be repeated with the AC line cord plug connection reversed. (IF necessary, a non-polarized adapter plug must be used only for the purpose of completing these check.)
Any current measured must not exceed 0.5 milliamp.

Any measurements not within the limits outlined above are indicative of a potential shock hazard and corrective action must be taken before returning the instrument to the customer.



SAFETY NOTICE

Many electrical and mechanical parts in television receivers have special safety-related characteristics.

These characteristics are often not evident from visual inspection, nor can protection afforded by them be necessarily increased by using replacement components rated for higher voltage, wattage, etc.

Replacement parts which have these special safety characteristics are identified in this manual; electrical components having such features are identified by "A" and shaded areas in the Replacement Parts Lists and Schematic Diagrams. For continued protection, replacement parts must be identical to those used in the original circuit. The use of a substitute replacement parts which do not have the same safety characteristics as the factory recommended replacement parts shown in this service manual, may create shock, fire, X-radiation or other hazards.

SERVICE INSTRUCTIONS

Note: (1) When performing any adjustments to resistor controls and transformers use non-metallic screwdriver or TV alignment tools.

(2) Before performing adjustment, TV set must be on at least 15 minutes.

X-RADIATION PROTECTOR CIRCUIT TEST

After service has been performed on the horizontal deflection system, high voltage system, or + B system, test the X-Radiation protection circuit to ascertain proper operation as follows:

- Apply 264 V AC using a variac transformer for accurate input voltage.
- Allow for warm up and adjust all customer controls for normal picture and sound.
- Turn the user Contrast control and the user Brightness control to the minimum. (The screen becomes dark.)
- 4. Be sure that the voltage at test point D607 cathode is approx. 17.0 V.
- 5. Apply the external voltage of 21 V to D607 cathode and be sure that the unit becomes OFF (stand-by) state, that is, the horizontal oscillation of the unit is stopped by the X-RAY protector circuit.
- Be sure that after disconnecting the external power source.

HIGH VOLTAGE CHECK

High voltage is not adjustable but must be checked to verify that the receiver is operating within safe and efficient design limitations as specified checks should be as follows:

- Connect an accurate high voltage meter between ground and anode.
- Operate receiver for at least 15 minutes at 264V AC line voltage, with strong air signal or properly tuned in test signal.
- 3. Turn the user Contrast control and the user Brightness control to the minimum.
- Be sure that the high voltage is approx. 25.0 kV.

SERVICE ADJUSTMENT

■ PIF/AFT/AGC ADJUSTMENT

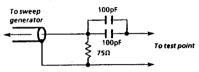
Adjusting Conditions

Adjusting Procedures

1. Tuner IFT Coils

The tuner has been factory preset (no adjustment is needed)

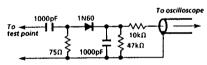
- 1. Set reception channel at E10 (When such signal is not available, set V_T voltage at 10V in V_H band.)
- 2. Connect sweep generator's output to the test point of tuner, by using a 75 Ω DC cut probe.



Connection Diagram of 750 DC Cut Probe.

Note: The sweep generator's probe should be grounded closely to the tuner test point.

- 3. Output level of sweep generator: 85 dB
- 4. Connect response lead (low impedance probe with detector) to TP201 (collector of Q201).

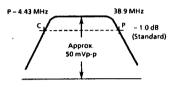


Connection Diagram of Low Impedance Probe (with Detector).

- 5. PIF AGC:
- Apply DC 4.0V to TP202 (pin (48) of IC801).
- 6. RF AGC:

Apply DC 4V to the tuner AGC terminal.

I. Adjust the tuner IF coils to obtain the waveform as shown figure below.



Adjust so that "P"and "C" are at the same level.

■ PIF/AFT/AGC ADJUSTMENT (Continued)

Adjusting Conditions Adjusting Procedures

2. P-Detector Adjustment

Adjusting Point

☐ T205: P-Detector coil

- Connect sweep generator's output to TP203 (pin (46) of IC801).
- Probe in use:
- 75Ω DC cut probe
- Sweep output level: 90 dB
- 2. PIF AGC:

Apply 4.0V DC to TP202 (pin (48) of IC801).

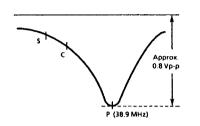
- 3. Have AFT muted (by pressing the preset key to bring in the SEARCH mode).
- Connect response lead to TP204.

The response lead in use should be a direct probe with a resistor of 10 k Ω included.

To oscilloscope 10kΩ

10 kΩ Direct Probe.

1. Adjust T205 so that 38.9 MHz signal is at maximum (± 50 kHz).



Adjust PIF AGC voltage so that the output waveform is of approx. 0.8 Vp-p.

3. AFT Adjustment

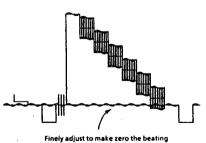
Adjusting Point

☐ T205: AFT coil

- Receive "PAL COLOUR BAR (channel-E12)" signal. If channel-E12 signal is not available, it is enough to receive the signal of more than channel-E5 or UHF signal.
- Signal strength: Over 55dB, Below 80dB
- 2. Connect the DC power supply to the tuner's V_T (approx. 11V to be applied) to receive channel-
- 3. Connect oscilloscope to TP401.
- Oscilloscope range: 0.5 V/div.
- Sweep time:
- 20 usec/div.
- Synchronization: Horizontal sync.
- 4. Connect the output of SSG (Standard Signal Generator) to the tuner IF output terminal across a capacitor of 1pF.
- SSG output: 38.9 MHz ± 5 kHz (non modulated)
- SSG output level; approx. 85 d8
- * When the preset button is at PST position, AFT is turned off.
- * When the preset button is set at NOR position, AFT is turned on.

Fine Adjustment

- Press the preset key to adjust the voltage of the DC power supply until there is no beating in the oscilloscope's waveform.
- 2. Set the preset button at NORMAL position.
- 3. Adjust T205 so that no beating is caused at the output waveform.



4-2

■ PIF/AFT/AGC ADJUSTMENT (Continued)

Adjusting Procedures Adjusting Conditions

4. PIF Overall Adjustment

- 1. Receive channel-E10 signal. If channel-E10 signal is not available, set V_T voltage at 10V in VH band.
- Connect sweep generator's output to the test point of tuner.
- Probe in use:

75Ω DC cut probe

- Sweep output level: 90 dB
- 3. Connect response lead to TP204. The response lead in use should be a direct probe with a resistor of 10 kohms included.
- 4. RF-AGC:

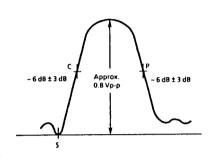
Apply approx. 4.0V DC to the tuner AGC terminal.

5. PIF AGC:

Apply approx. 4.0V DC to TP202.

- 6. Connect a 120 ohm damping resistor in parallel to R215, short C243 and C244.
- 7. Turn off AFT.

- 1. Adjust IF AGC voltage so that the output waveform is of approx. 0.8Vp-p.
- 2. Check that the overall waveform is as shown in Figure below.



5. RF-AGC Cut-In Adjustment

Adjusting Point

- ☐ R248: RF-AGC control
- 1. Keep the AGC Cut-in control near the center
- 2. Receive "COLOUR BAR (channel-E12)" signal.
- Signal strength:

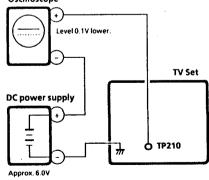
 $54 dB \pm 1 dB$ (with 50Ω open)

- 3. Connect the oscilloscope to the tuner's AGC terminal (TP210).
- Range: DC range
- ◆ Voltage: 10mV/div.
- Sweep: 10msec./div.
- * Set the DC power supply to about 6.0V and turn up the oscilloscope range to 10mV (DC).

- 1. Turn R248 to obtain the highest voltage.
- 2. Turn R248 slowly in the opposite direction until the voltage drops 0.1V lower than the highest
- 3. Change the antenna input signal to 65dB ± 2dB and make sure there is no noise. Turn up the input signal to 90 - 95dB to be sure that there is no cros-modulation beat.

Oscilloscope

5-1



■ 115V LINE ADJUSTMENT

Adjusting Conditions	Adjusting Procedures
Adjusting Point □ R711: 115V Adjustment Control	1. Adjust the R711 until the TP701's voltage becomes 115V ± 0.5V.
 Set the R711 to 5/10 before supplying power. Receive "MONOSCOPE PATTERN" signal. Set Contrast and Brightness controls at MAX position. Connect DC milliammeter to TP602 and TP603. Using the DC milliammeter, check to see that the beam current is between 700 and 800 μA. Note: nother cases than the above, abjust the subcontrast control (R420) Connect Digital voltmeter to TP701. 	

WIDEO CHROMA ADJUSTMENT

Adjusting Conditions	Adjusting Procedures

g

1. CRT Cut-off Adjustment	
Adjusting Point R853: Red Bias control R859: Green Bias control Biue Bias control Green Source Control R857: Green Control (a part of T602) R863: Blue Drive control Note: Prior to this adjustment, warm up the unit with the beam current of more than 450 μA for more than 30 minutes.	1. Slowly turn the Screen control clockwise until the horizontal raster appears slightly, and stop it. 2. Here, one of the three colours (red, blue, green appears first as the Screen control is turned. So touching off the Bias control belonging to the first colour, use and move the other two control so that the horizontal raster becomes white. 3. Turn the Screen control counterclockwise until the horizontal raster disappears, and stop it.
1. Receive "MONOSCOPE PATTERN" signal. 2. Push the "P-N" key on the remote controller to make the picture normal. 3. Set Red bias control at MIN position. Set Green bias control at MIN position. Set Blue bias control at MIN position. Set Blue drive control at CENTER position. Set Blue drive control at CENTER position. 4. Set the Screen control at MIN position. 5. Set to the AV mode. Make sure the sign disappears and make TP401 and TP402 short-circuited.	

2. White Balance and Back Ground Adjustment

2. Writte Buildrice and Buck Ground Fit	, · · ·
Adjusting Point R857: Green Drive control R863: Blue Drive control R420: Sub-Contrast control Note: Prior to this adjustment, warm up the unit with the beam current of more than 450 µA for more than 30 minutes. 1. Receive "MONOSCOPE PATTERN" signal. 2. Set the Contrast and Brightness controls at MAX position. 3. Connect beam ammeter to TP601 and TP602. (Full scale: 1 mA)	200 μA, and check that the colour temperature is at 9300°K. If the temperature is not at 9300°K, go back to "CRT CUT-OFF ADJUSTMENT" and repeat

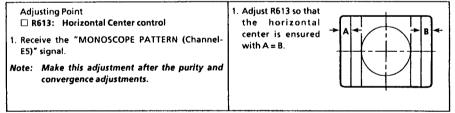
■ VIDEO CHROMA ADJUSTMENT (Continued)

Adjusting Conditions	Adjusting Procedures	
3. Sub-Contrast Adjustment		
Adjusting Point R420: Sub-Contrast control	Adjust Sub-Contrast control so that the beam current becomes 0.8 mA.	
Note: Prior to this adjustment, warm up the unit with the beam current of more than 450 μ A for more than 30 minutes.		
1. Receive "MONOSCOPE PATTERN" signal. 2. Set the Contrast and Brightness controls at MAX position. 3. Connect beam ammeter to TP601 and TP602. (Full scale: 1 mA)		

■ DEFLECTION LOOP ADJUSTMENT

Adjusting Conditions	Adjusting Procedures

1. Horizontal Center Adjustment



2. Vertical Size Adjustment

Adjusting Point R509: Vertical Size control	Adjust R509 so that the vertical size correspond the overscan of the horizontal one.		
Receive the "MONOSCOPE PATTERN (Channel- E5)" signal. Set the Brightness and Contrast controls to MAX position.	V-SIZE 8% TYP 10% MAX		
Note: Keep the vertical size well-balanced with the horizontal one.	,		

FOCUS ADJUSTMENT

Adjusting Conditions	Adjusting Procedures
Adjusting Point T602: Focus control (a part of T602) 1. Receive "MONOSCOPE PATTERN" signal. 2. Set Contrast control at NORMAL position. 3. Set Brightness control at MAX position (with 0.8 mA of beam current). (Instead of monoscope pattern signal, it is allowed to use white pattern signal of 88% modulation.)	Adjust Focus control to have best focus at the central area of CRT. Adjust point

■ SIGN POSITION ADJUSTMENT

Adjusting Conditions	Adjusting Procedures
Adjusting Point T1001: Sign Position control 1. Turn the channel call on (on the remote controller).	1. Adjust T1001 so that the center of the first-digit figure of the channel number be about 40 mm from the right edge of the CRT.

PURITY ADJUSTMENT

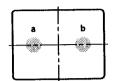
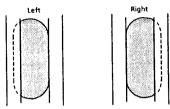
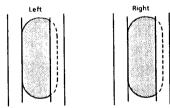


Figure A.



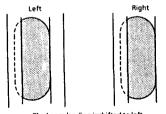
The beam landing is shifted outwards.

Figure B.



The beam landing is shifted to right.

Figure C.



The beam landing is shifted to left.

Figure D.

Adjusting Conditions

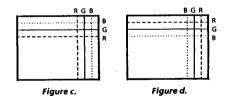
- 1. Prior to the purity adjustment, warm up the unit with beam current of more than 450 μA, for more than 30 minutes.
- 2. Receive the green signal alone and adjust the beam current to approx. 450 μ A.
- 3. Fully degauss the CRT with the degaussing coil.
- 4. Before the purity adjustment, it is needed to roughly adjust the static convergence.
- 5. Set the purity magnet at the position which gives zero (0) magnetic field.

Adjusting Procedures

Adjustment:

During the adjustment, keep the unit facing the east.

- Observe the green spots ("a" and "b") with a microscope as shown in Fig. A, and adjust the purity magnet so that they are at the specified landing position.
- If the right and left green spots are both deviated outwards from their landing positions as shown in Fig. B, push the deflection yoke forwards until their positions are corrected.
- If the beam landing is shifted to right or left as shown in Figs. C and D, adjust the opening degree of the purity magnet so that the beam landing is correctly positioned.
- Adjust the purity magnet so that the beam landing is correct at either of the central part, right and left parts of screen, then check that the green beams at four corners of screen are all correctly positioned.
- Finally, check that the beam landing at any pat of screen is satisfactory with the Rank "B" specifications.
- If the green beam is positioned to mix with the other colour, pull the deflection yoke backward.
- Outside of the specified landing:
 To front of the deflection yoke.
- Inside of the specified landing:
- To back of the deflection yoke.
- Set the raster rotation at "0" position (with the unit facing the east).
- 7. Tighten the screws of the deflection coil. Tightening torque: 11 kg ± 2 kg.



Adjusting Conditions

This adjustment should be performed after the purity magnet adjustment.

- 1. Receive "CROSSHATCH PATTERN" signal.
- 2. Set the Brightness control and Contrast control at MAX position.

Adjusting Procedures

STATIC CONVERGENCE

- Adjust the opening degree of the 4-pole magnet and rotate the magnet to converge red and blue lines.
- Adjust the opening degree of the 6-pole magnet and rotate the magnet to converge red, blue and green lines.

DYNAMIC CONVERGENCE

- Dynamic convergence (convergence of the three colour fields) at the edges of CRT screen is accomplished in the following manner.
- Convergence in Fig. a:

Insert wedge"a" between the deflection yoke and CRT, and tilt the deflection yoke upward until the mis-convergence shown in *Fig.* a is corrected.

• Convergence in Fig. b:

insert wedges "b" and "c" between the deflection yoke and CRT, and tilt the deflection yoke until the mis-convergence shown in *Fig. b* is corrected.

• Convergence in Fig. c:

Insert wedge "c" deeply between the deflection yoke and CRT, and tilt the deflection yoke to right until the mis-convergence shown in Fig. c is corrected.

• Convergence in Fig. d:

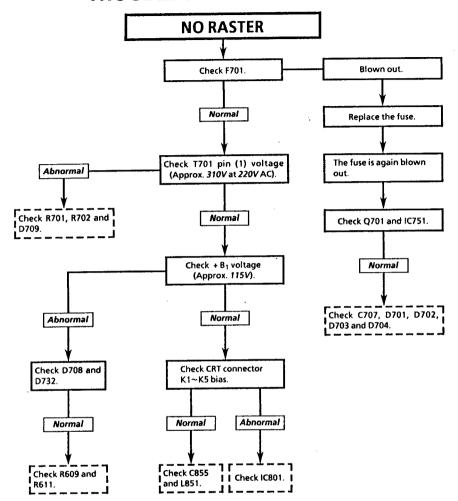
Insert wedge "b" deeply between the deflection yoke and CRT, and tilt the deflection yoke to left until the mis-convergence shown in *Fig. d* is corrected.

- 4. Stick the three wedges onto the CRT, and apply glass tapes thereon.
- Apply lacquer to the deflection yoke screw, magnet unit (made of purity, 4-pole and 6-pole magnets) and magnet unit screw.

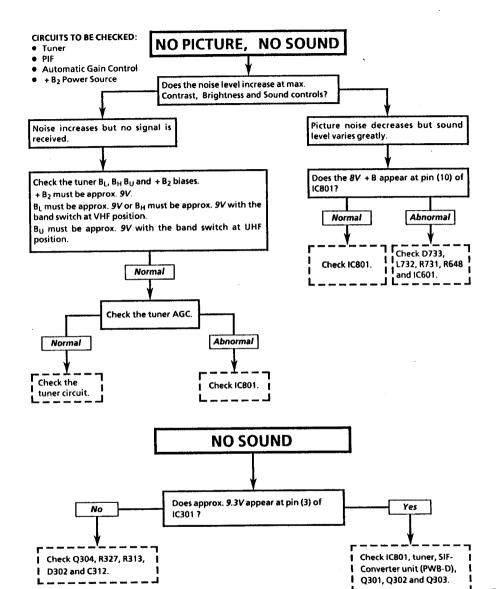
After the adjustment, receive either the Red or the Blue signal and check that there is no mixture with the other colour signal.

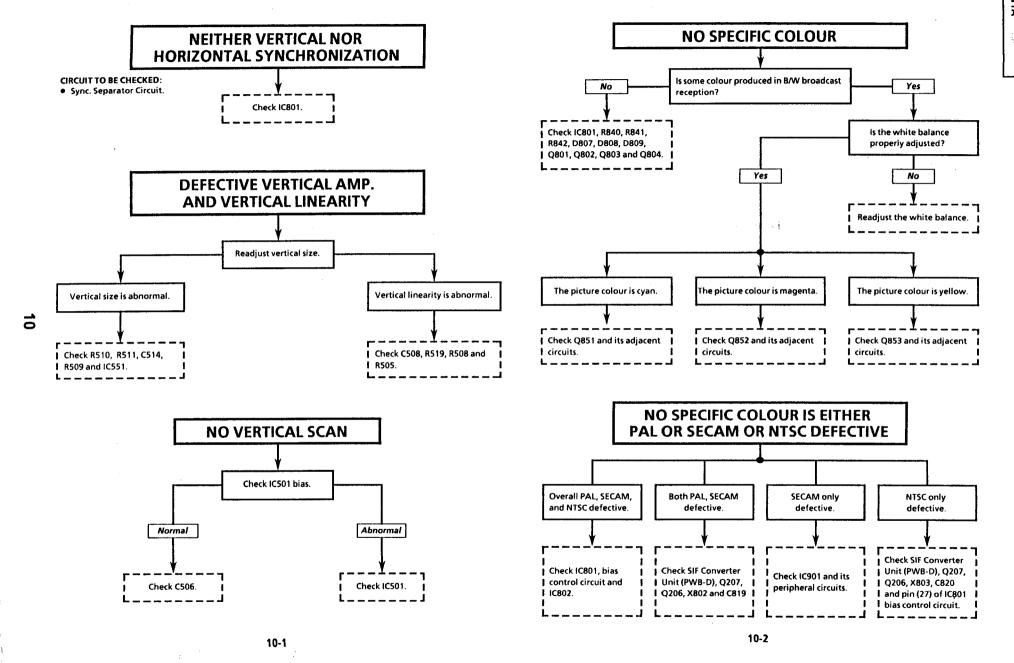
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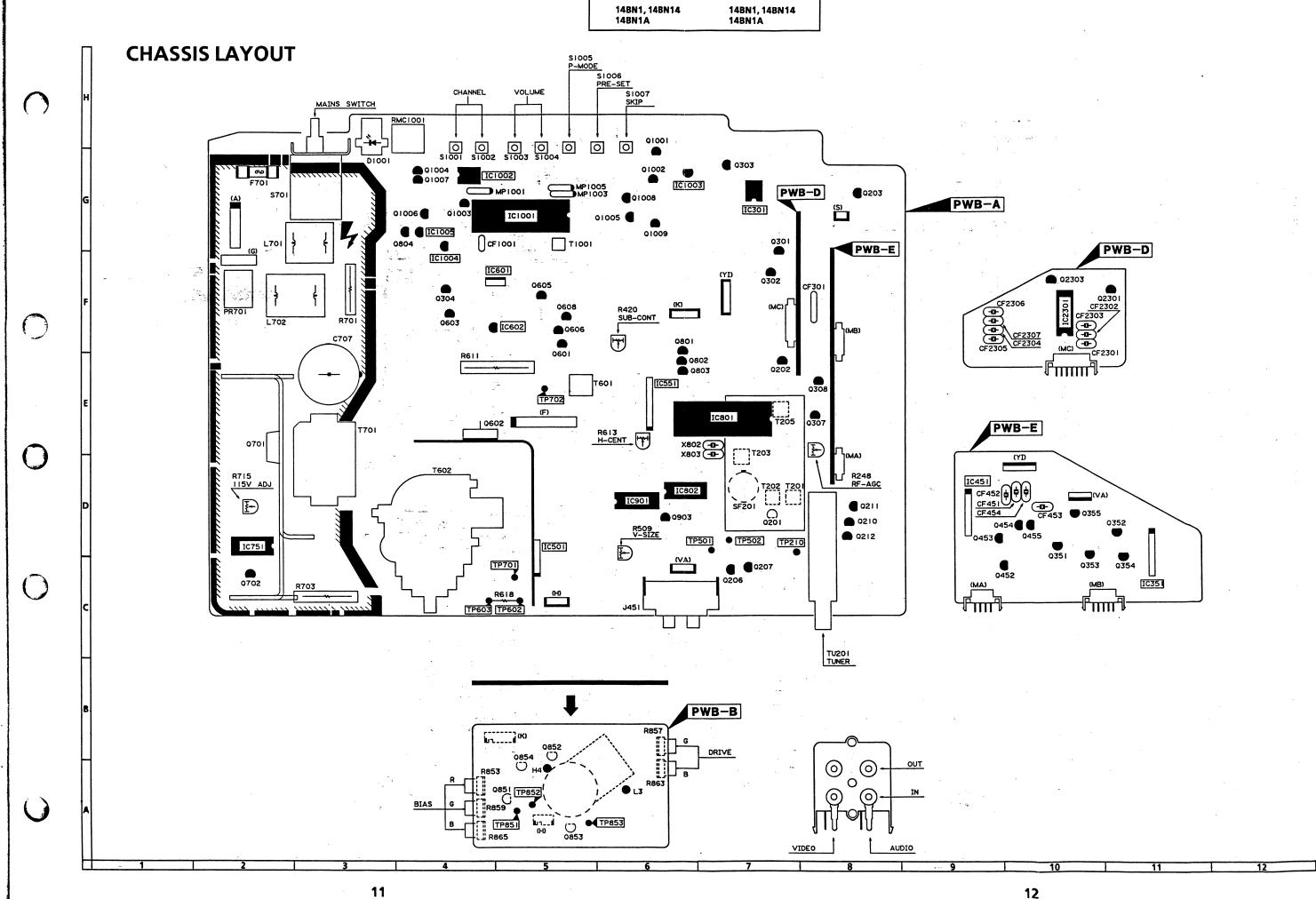
TROUBLE SHOOTING TABLE



9

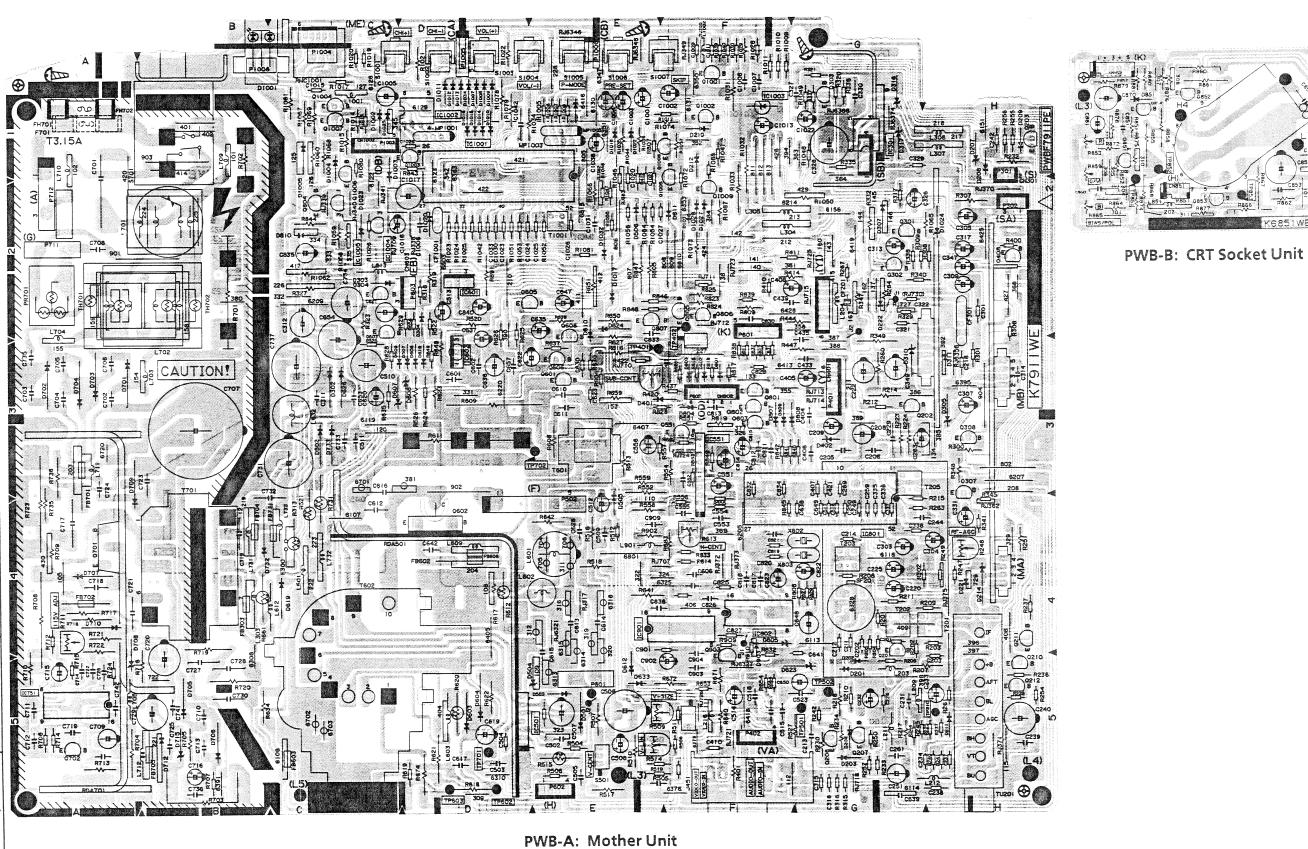


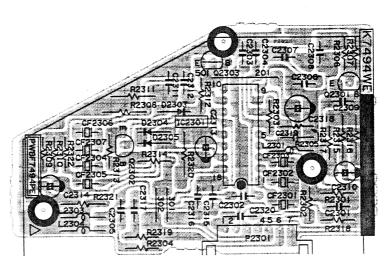




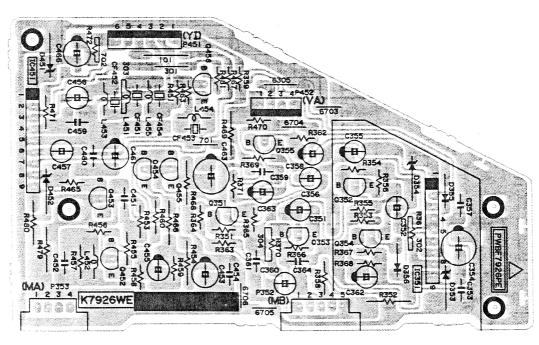
PRINTED WIRING BOARD ASSEMBLIES

(All the PWBs here are shown as viewed from their wiring sides)



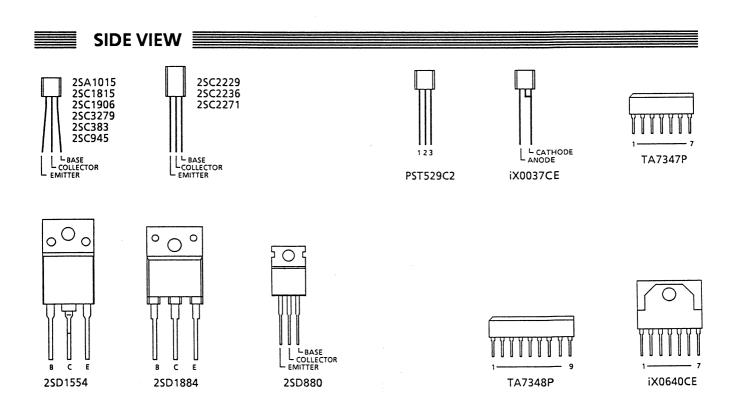


PWB-D: SIF Converter Unit



PWB-E: AV Unit

SOLID STATE DEVICE BASE DIAGRAM



(16) 145 Vp-p (H)

(17) 950 Vp-p (H)

DESCRIPTION OF SCHEMATIC DIAGRAM

CAUTION: This circuit diagram is original one, therefore there may be a slight difference from yours.

SAFETY NOTE:

- 1. DISCONNECT THE AC PLUG FROM THE AC OUTLET BEFORE REPLACEING PARTS.
- 2. SEMICONDUCTOR HEAT SINKS SHOULD BE REGARDED AS POTENTIAL SHOCK HAZARDS WHEN THE CHASSIS IS OPERATING.

IMPORTANT SAFETY NOTICE:

PARTS MARKED WITH "A" ()) ARE IMPORTANT FOR MAINTAINING THE SAFETY OF THE SET. BE SURE TO REPLACE THESE PARTS WITH SPECIFIED ONES FOR MAINTAINING THE SAFETY AND PERFOMANCE OF THE SET.

AMARK: X-RAY RELATED PARTS.

SERVICE PRECAUTION:

THE AREA ENCLOSED BY THIS LINE (— — —) IS DIRECTLY CONNECTED WITH AC MAINS VOLTAGE.
WHEN SERVICING THE AREA, CONNECT AN ISOLATING TRANSFORMER BETWEEN TV RECEIVER AND AC LINE TO ELIMINATE HAZARD OF ELECTRIC SHOCK.

NOTES:

- 1. The unit of resistance "ohm" is omitted. (K = 1000 ohms, M = Meg ohm).
- 2. All resistors are 1/8W, unless otherwise noted.
- 3. All capacitors are μF , unless otherwise noted. $(P = \mu \mu F)$.
- 4. The diodes, whose parts code is not described, are the 1SS119.

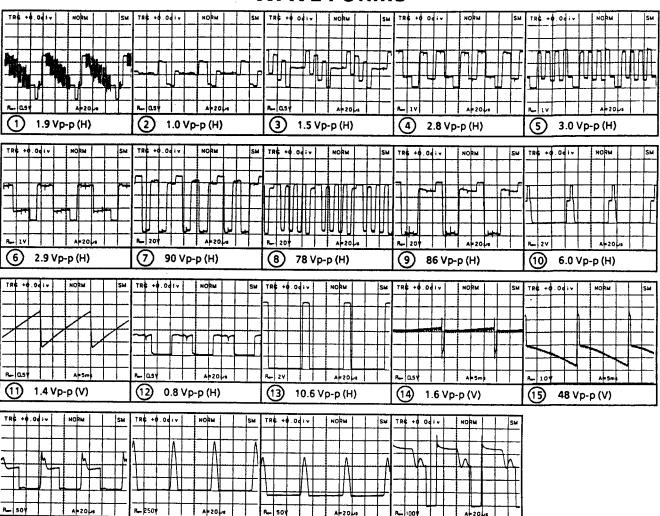
VOLTAGE MEASUREMENT CONDITIONS:

- 1. The voltage without parenthesis represents the value measured with PAL colour signal.
- The voltage in parenthesis represents the value measured with no signal.
- 3. All the voltages were measured by using a high impedance voltmeter.

WAVEFORM MEASUREMENT CONDITIONS:

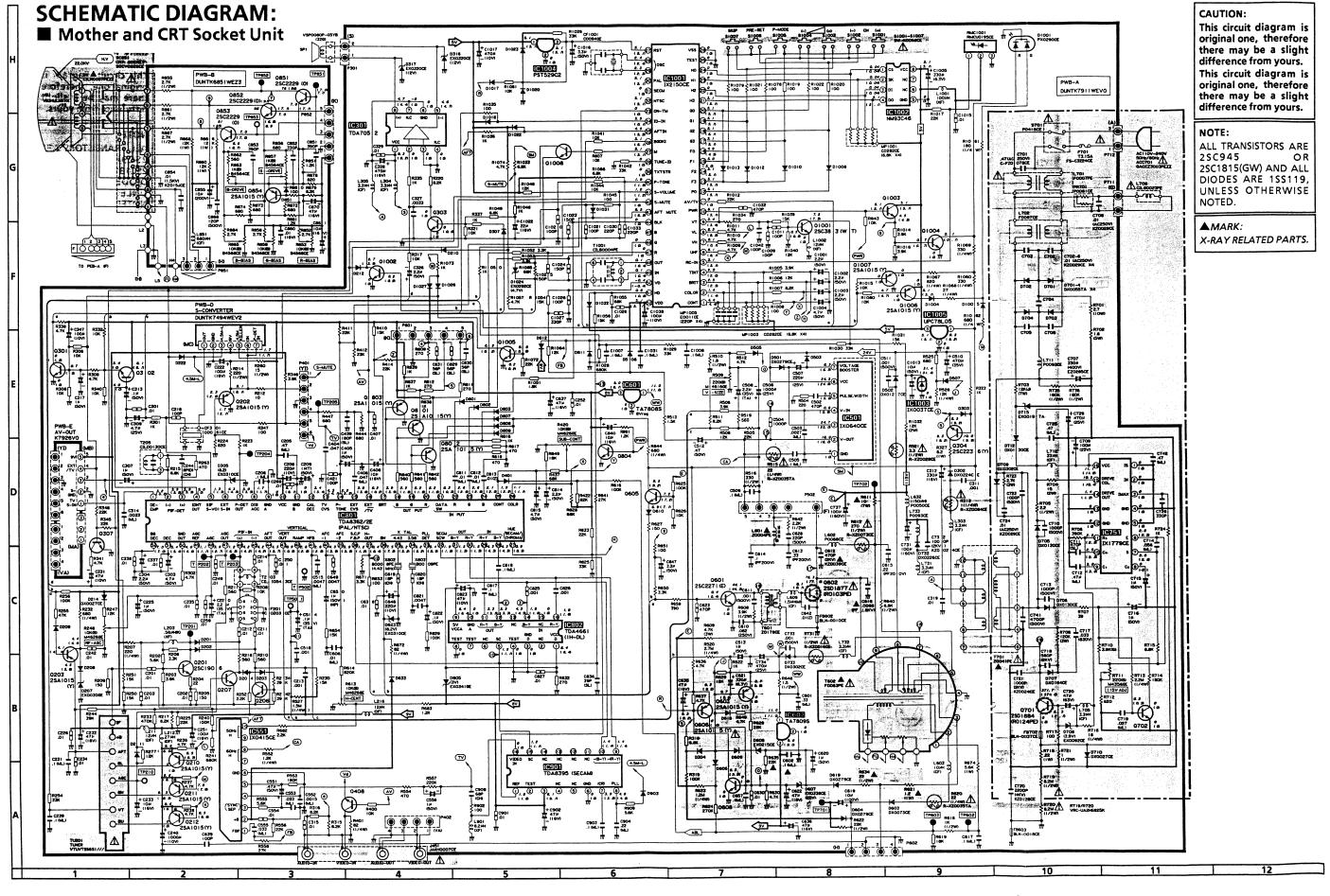
- 1. The colour bar signal applied to the TP401 is 2.0 Vp-p.
- 2. The tuner AGC voltage is approximately 4V.

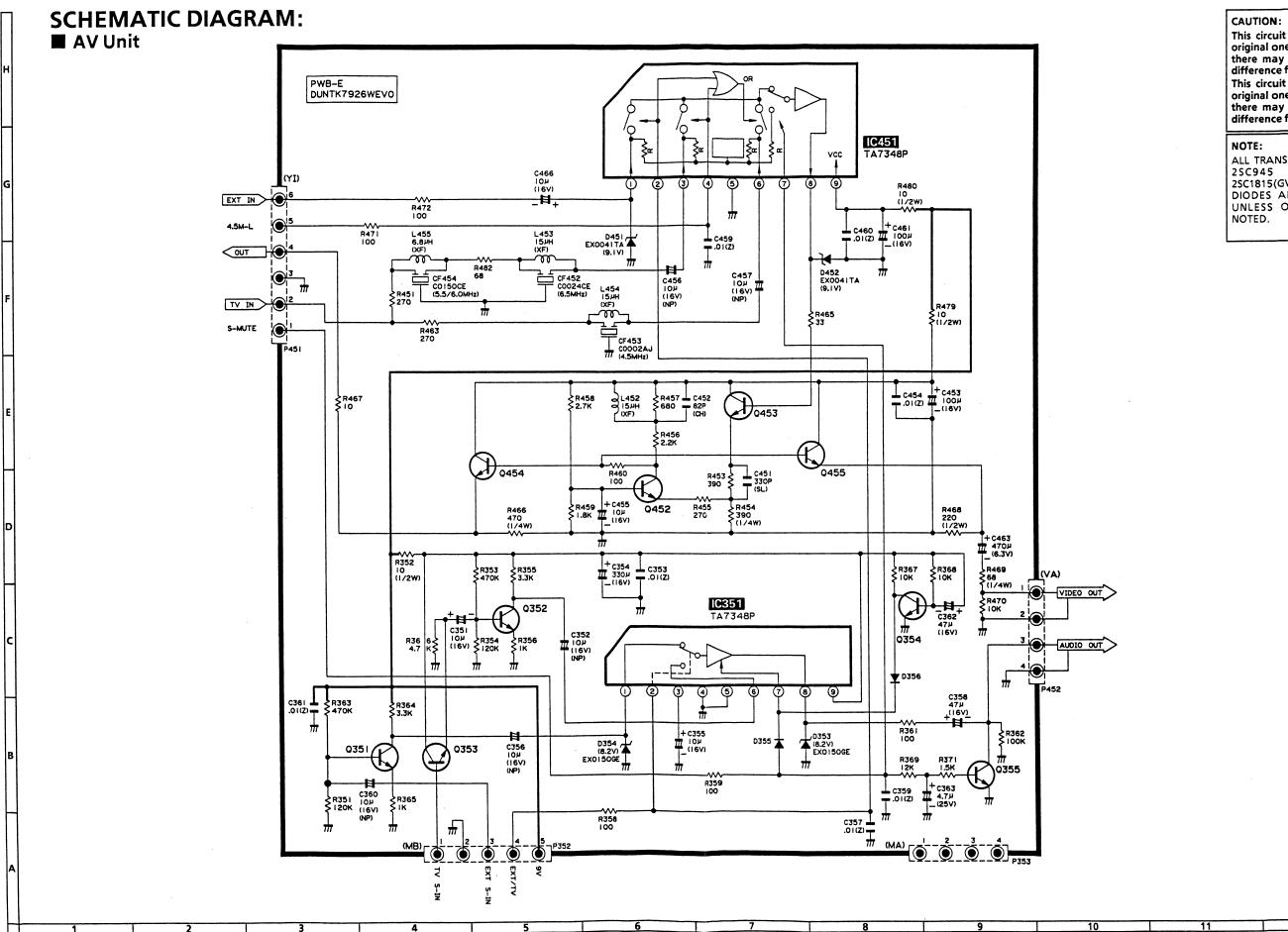
WAVE FORMS



(18) 150 Vp-p (H)

(19) 550 Vp-p





This circuit diagram is original one, therefore there may be a slight difference from yours. This circuit diagram is original one, therefore there may be a slight difference from yours.

ALL TRANSISTORS ARE 2SC945 OR 2SC1815(GW) AND ALL DIODES ARE 1SS119, UNLESS OTHERWISE 14BN1, 14BN14
14BN1A

14BN1A

14BN1, 14BN14
14BN1A

14BN1A

14BN1, 14BN14
14BN1A

14BN1, 14BN14
14BN1A

PWB-D DUNTK7494WEV2 C2305 33P 2303 L2301 - 100P IOOP (CH)_ R2304 C2304 .068 CF2303 CF2302 CF2301 (ML) A0025CE A0024CE A0023CE R2305 \$33K C2306 .001 R2303 (ML) 100 12. 4 12. 4 **(9)** (4) (8) SIF IN MIX OUT 12M OSC GND GATE VCC 11.5M OSC SIFIN IOM OSC <u>⊥</u> c2307 IC2301 IX0776CE - .01 (ML) OUT **(** (3) a 5 100 3. *2* 2. 0 R2321 . C2308 D2304 Ţ D2305 C2314 C2315 ען. (50V) 13 + R2320 ## SIM (1/4W) 100P C23 עו. (50V C2316 1 $\pi \pi$ \$R2306 \$3.3K C2320 (CH) R2309 **♦** R2322 R2310 220 220 220 CF2305 ___ CO145CE 묶 R2307 ≥ 1.2K CF2304 CO144CE D2 303 CF2307 CF2306 R2319 330 COOOLAJ C0001AJ C2317 47P (CH) L2304 6.8JH Q2302 R2312 > 3.3K R2313 /// C2309 2309 R2315 R2317 .001 R2317 (ML) (1/4W) 330 +C2318 # (16V) C2319 1 .01 (MC) P2301 97 P.DET

SCHEMATIC DIAGRAM:

■ SIF Converter Unit

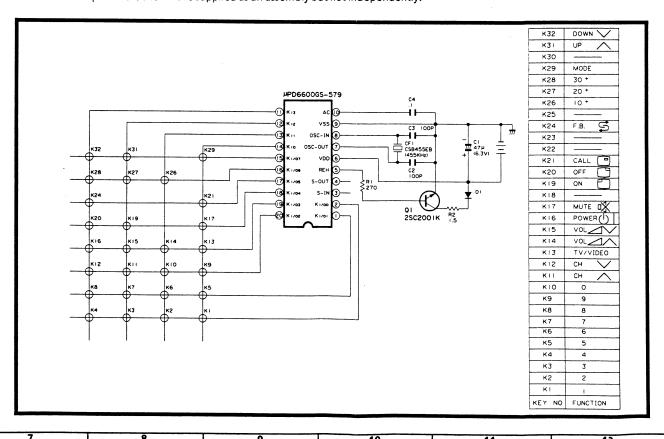
0

1)11 (3

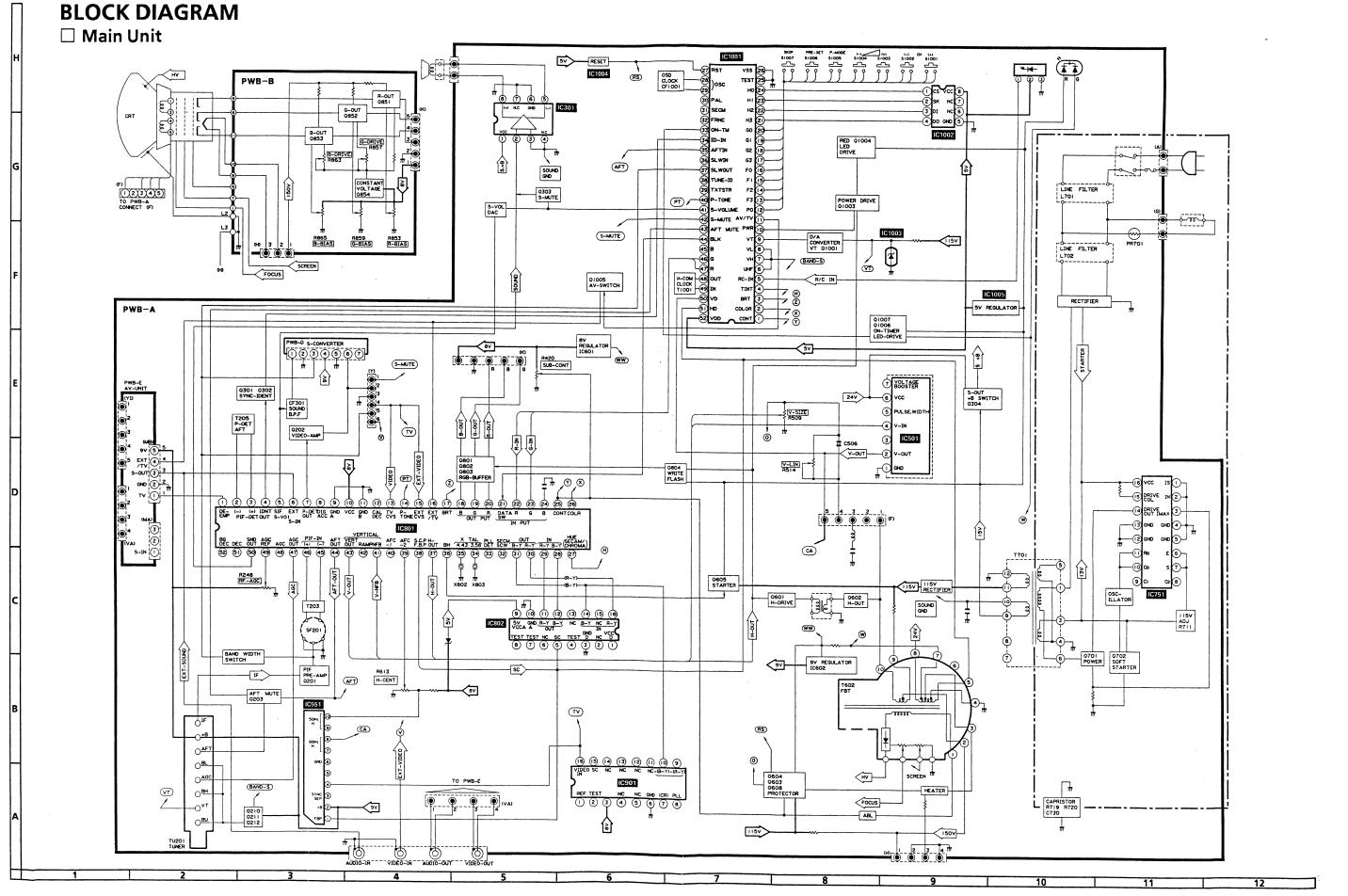
Infrared Remote Control Unit
NOTE: The parts here shown are supplied as an assembly but not independently.

RRMCG0833PESA

▲ VTUVTSS6S1///



14BN1, 14BN14 14BN1, 14BN14 14BN1A 14BN1A



BLOCK DIAGRAM: ☐ SIF Converter Unit SIF-CONVERTER OUT OSC 10.OMHz 4.5MHz/5.5/6.0/5.0MHz CONTROL. H: 5.5/6.0/6.5MHz L: 4.5MHz G 6.0MHz FILTER ET. 4.5MHz FILTER PEAK 4.5MHz 6.0MHz FIL.TER □ AV Unit EXT-VIDEO IN 4.5M or 5.5M/6.0M/6.5M SW-CONTROL L: 4.5M H: 5.5M/6.0M/6.5M AV-VIDEO 5.5M/6.0M/6.5M SOUND TRAP TV-VIDEO IN AV-VIDEO MUTE 4.5M SOUND TRAP TV-VIDEO VIDEO OUT \bigcirc AUDIO OUT EXT-SOUND IN SOUND MUTE TV-SOUND IN

PARTS LIST

PARTS REPLACEMENT

Replacement parts which have these special safety characteristics identified in this manual: electrical components having such features are identified by " \(\begin{align*} \hat{\Delta}\)" in the Replacement Parts Lists. Components marked with an (\(\beta\)) are related to X-Ray Protection circuit.

The use of a substitute replacement part which does not have the same safety characteristics as the factory recommended replacement parts shown in this service manual may create shock, fire or other hazards.

"HOW TO ORDER REPLACEMENT PARTS"

To have your order filled promptly and correctly, please furnish the following informations.

1. REF. NO. 2. PART NO. 3. DESCRIPTION 4. CODE

MARK *: SPARE PARTS-DELIVERY SECTION

Ref. No. Part No. * Description Code

PICTURE TUBE

∆ VB1	VB34JLN61X/*S R CRT	CA
▲ A DY	RCiLH0037PEZZ R Deflection Yoke	вС
 ∆ L708	RCiLG0023PEZZ R Degaussing (ADG) Coil	AN
	LHLDC0001PEZZ R ADG Coil Holder,	AC
	× 4 used	
	PMAGF3006CEZZ J Purity Magnet	ΑK
	PSPAG0004PEZZ R Wedge, Rubber,	AB
	×3 used	
	MSPRT0001PEFJ R CRT Spring	AC

--- End of PICTURE TUBE ----

PRINTED WIRING BOARD ASSEMBLIES (NOT REPLACEMENT ITEM)

PWB-A DUNTK7911WEV0 - Mother Unit
(with PWB-D and E)

PWB-B DUNTK6851WEZ3 - CRT Socket Unit

PWB-C - Not Used --
PWB-D DUNTK7494WEV2 - SIF Converter Unit

PWB-E DUNTK7926WEV0 - AV Unit ---

- End of P.W.B. ASSEMBLIES -

Ref. No. Part No. ★ Description Code

PWB-A DUNTK7911WEV0 MOTHER UNIT

TUNER

NOTE: THE PARTS HERE SHOWN ARE SUPPLIED AS AN

ASSEMBLY BUT NOT INDEPENDENTLY.

TU201 VTUVTSS6S1/// J Tuner, VHF/UHF BB

INTEGRATED CIRCUITS

	IC301	VHITDA7052/-1	J	Sound Output	AL
	IC501	RH-iX0640CEZZ	j	Vertical Output,	ΑK
				LA7830	
	IC551	RH-iX0415CEZZ	j	LA7950	ΑK
	IC601	VHITA78085/-1	J	8V Regulator	ΑD
	IC602	VHITA78095/-1	J	9V Regulator	ΑE
Δ	IC751	RH-iX1779CEZZ	j	Power Supply	AR
	IC801	VHITDA8362/2E	j	PAL/NTSC TV Processor	BA
	IC802	VHITDA4661/-1	J	64μ s Baseband DL	AS
	IC901	VHITDA8395/-1	j	SECAM Decoder	ΑY
	IC1001	RH-iX2150CEZZ	j	Voltage Synthesizer	ΑZ
	IC1002	VHINM93C46/-1	J		AG
	IC1003	RH-iX0037CEZZ	J	Zener IC, UPC574J	ΑF
	IC1004	VHiPST529C2-1	J		ΑD
	IC1005	VHIUPC78L05-4	j	5V Regulator	ΑD

TRANSISTORS

	IKANSI	21	OK2	
Q201	VS2SC1906//1E	J	2SC1906	AC
Q202	VS2SA1015Y/1E	J	2SA1015(Y)	AC
Q203	VS2SA1015Y/1E	J	2SA1015(Y)	AC
Q206	VS2SC945AP/-1	j	2SC945A(P)	AB
Q207	VS2SC945AP/-1	j	2SC945A(P)	AB
Q210	V\$2\$A1015Y/1E	J	2SA1015(Y)	AC
Q211	V\$2\$A1015Y/1E	J	2SA1015(Y)	AC
Q212	V\$2\$A1015Y/1E	j	2SA1015(Y)	AC
Q301	VS2SC945AP/-1	j	2SC945A(P)	AB
Q302	VS2SC945AP/-1	J	2SC945A(P)	AB
Q303	VS2SC945AP/-1	J	2SC945A(P)	AB
Q304	V\$2\$C2236Y/-1	J	2SC2236(Y)	AD
Q307	V\$2\$C945AP/-1	J	2SC945A(P)	AB
Q408	VS2SC945AP/-1	J	2SC945A(P)	AB
Q601	VS2SC2271E/-1	J	2SC2271(E)	AD
∆ Q602	VS2SD1877//1E	j	2SD1877	AL
 ∆ Q603	VS2SA1015Y/1E	j	2SA1015(Y)	AC
Q605	VS2SC945AP/-1	j	2SC945A(P)	AB
A Q606	VS2SA1015Y/1E	J	2\$A1015(Y)	AC
⚠ Q608	V\$2\$C945AP/-1	J	2SC945A(P)	AB
⚠ Q701	V\$2\$D1884//1E	J	2SD1884	AP
 Q702	VS2SC945AP/-1	j	2SC945A(P)	AB
Q801	V\$2\$A1015Y/1E	J	2SA1015(Y)	AC
Q802	V\$2\$A1015Y/1E	J	2SA1015(Y)	AC
Q803	VS2SA1015Y/1E	J	2SA1015(Y)	AC

▲MARK: X-RAY RELATED PARTS.

Ref. No.	Part No.	*	Description	Code	Ref. No.	Part No.	*	Description	Code
PWE	3-A DUNTK	<u>7</u> 9	11WEV0			DIODES	(Co	ntinued) _.	
	MOTHER	U	NIT (Continued	I)	D633	VHD1SS119//1	E J	155119	AA
					⚠ D701	RH-DX0055TAZ	ΖJ	•	AD .
	TRANSISTOR	S (Continued)		⚠ D702	RH-DX0055TAZ	ΖJ		AD
Q804	V\$2\$C945AP/-1	J	2SC945A(P)	AB	⚠ D703	RH-DX0055TAZ	ΖJ		AD
Q1001	V\$2\$C383-WT-1	J	2SC383(WT)	ΑE	⚠ D704	RH-DX0055TAZ	Z J		AD
Q1002	V\$2\$C945AP/-1	J	2SC945A(P)	AB	⚠ D705	RH-DX0130CEZ	Zj		AE
Q1003	V\$2\$C945AP/-1	J	2SC945A(P)	AB	∆ D706	RH-DX0130CEZ	ΖJ		AE
	V\$2\$C945AP/-1		` •	AB	⚠ D707	RH-DX0164CEZ			AC
· · · · · · · · · · · · · · · · · · ·	V\$2\$C945AP/-1		• •	AB	⚠ D708	RH-EX0092CEZ		Zener Diode, 3.9V	AB
-	V\$2\$A1015Y/1E		2SA1015(Y)	AC	<u> </u>	RH-DX0302CEZ			AC
	V\$2\$A1015Y/1E		2SA1015(Y)	AC	<u> </u>	RH-DX0027CEZ			AE
Q1008	V\$2\$C945AP/-1	J	2SC945A(P)	AB	⚠ D712	RH-DX0130CEZ		# 5'. I.	AE
					<u> </u>	RH-EXO019TAZ		Zener Diode	AB AC
					D732	RH-DX0226CEZ			AC
	DIC	\ D.			D733	RH-DX0302CEZ		166410	AA
D201	DIC				D801 D802	VHD1SS119//1 VHD1SS119//1			AA
D201 D202	VHD1SS119//1E VHD1SS119//1E			AA AA	D802	VHD155119//1			AA
D202	VHD155119//1E			AA	D805	RH-EX0341GEZ			AA
D203	VHD133119//1E			AA	D807	VHD1SS119//1			AA
D207	RH-EX0030GEZ			AB	D808	VHD1SS119//1			AA
D208	VHD1SS119//1			AA	D809	VHD1SS119//1			AA
D209	VHD1SS119//18			AA	D903	VHD1SS119//1			AA
D210	VHD1SS119//18			AA	D1001	RH-PX0290CEZ			AC
D211	VHD1SS119//1E			AA	D1004				AA
D212	VHD1SS119//1E			AA	D1005				AA
D214	RH-DX0027CEZZ			ΑE	D1008	VHD1\$\$119//1	E J	155119	AA
D222	VHD1SS119//18	J	155119	AA	D1010	VHD1SS119//1	ΕJ	155119	AA
D302	RH-DX0224CEZZ			AB	D1012	VHD1SS119//1	E J	1SS119	AA
D303	VHD1SS119//1E	J	1SS119	AA	D1013	VHD1\$\$119//1	E J	155119	AA
∆ D304	VHD1SS119//18	J	1\$\$119	AA	D1017	VHD1SS119//1	E J	155119	AA
D305	RH-EX0310CEZZ	. J	Zener Diode, 8.2V	AA	D1018	VHD1\$\$119//1	E J	155119	AA
D307	VHD1SS119//18	J	155119	AA	D1020	VHD1SS119//1	ΕJ	155119	AA
D316	RH-EX0320CEZZ	j	Zener Diode, 12V	AA	D1022	VHD1SS119//1	E J	155119	AA
D317	RH-EX0320CEZZ	J	Zener Diode, 12V	AA	D1023	VHD1SS119//1	E J	155119	AA
D401	VHD1SS119//18		155119	AA	D1024	RH-EX0292CEZ	ΖJ	Zener Diode, 4.2V	AA
D501	RH-DX0279CEZZ	J		AB	D1026	VHD1SS119//1	E J	155119	AA
D502	RH-DX0127CEZZ	ز		AC		VHD1\$\$119//1			AA
D503	VHD1SS119//18	J	155119	AA		VHD1SS119//1			AA
D505	VHD1SS119//1	: J	1\$\$119	AA	D1032	VHD1\$\$119//1	ΕJ	155119	AA
D506	VHD1SS119//1			AA					
D507	VHD1SS119//18		155119	AA					
D603	RH-DX0073CEZZ			AD		DA CV A C	-D	CID CI II TC	
D604	RH-DX0279CEZZ			AB	140400			CIRCUITS	
<u> </u>	VHD1SS119//1			AA		11 RMPTC0282CEZ		= -	AC
⚠ D607	RH-EX0338CEZ			AB		3 RMPTC0282CEZ			AC AC
⚠ D608	RH-EX0215CEZ			AB				Capacitor 220p x 4	AC AV
⚠ D609	VHD155119//1			AA AA	<u>™ 5K/01</u>	KIVIP I PUUD I CEZ	. Z J	Positive Coefficient	AV
D610 D611	VHD155119//1			AA AA	Venn	p_p; = 0,000 n = 7	7 0	Thermistor	АН
D611	VHD1SS119//1			AA AA	X802 X803	RCRSB0008PEZ RCRSB0009PEZ		•	AL
Ø D612	VHD1S\$119//11			AA	A0U3	ACA3000097E2	^	. Crystar, 5.30(VITZ	AL.
<u> </u>	RH-DX0279CEZZ		199113	AB					
D623	RH-EX0310CEZ		Zener Diode. 8.2V	AA					
		. •	_3						

Ref. No.	Part No.	*	Description C	ode	Ref. No.	Part No.	*		Description	Code
PWB	-A DUNTK	(79 ⁻	11WEV0			CAPAC	CIT	ORS	-	
			NIT (Continued)		C201	VCKYMN1CY103N	J	0.01	16V Ceramic	AA
	· · · · · · · · · · · · · · · · · · ·				C202	VCKYMN1CY103N			16V Ceramic	AA
	COILS AND T				C203	VCKYMN1CY103N			16V Ceramic	AA - AB
CF301	RFILC0061CEZ			AF	C205	VCFYHA1HA474J			50V M. Polyeste	
	RFILC0094GEZ			AC	C206	VCQYSH1HM104K			50V Mylar	AB
	VP-XFR56K000		•	AB	C208	VCEAGA1AW227M			10V Electrolytic	AB
	VP-DF120K000		•	AB	C209	VCEAGA1HW105T			50V Electrolytic	AB
L212	VP-DF270K000		•	AB	C211	VCKYMN1CY103N			16V Ceramic	AA AA
L216	VP-DF120K000		•	AB	C212	VCKYMN1CY103N			16V Ceramic	AA
L303	VP-CF3R3K000			AB	C213	VCKYD41HB102K			50V Ceramic 16V Ceramic	AA
L304	VP-CF3R3K000		•	AB	C214	VCKYMN1CY103N		100p		AA
L305	VP-CF3R3K000			AB	C218	VCKYMN1HB101K		•	35V Tantalum	AC
▲ L601	RCILZ0004PEZ		<u> </u>	AN	C220	VCSATA1VE225K			16V Electrolytic	
L602	RCiLP0088CEZ			AG	C222	VCEAGA1CW107M				
L603	VP-CF100K000			AB	C225	VCEAGA1HW105M				AA
L609	VP-CF1R5M000		Coil, 1.5μH	AB	C226	VCKYMN1CY103N				
L632	RCILP0050CEZ		Peaking Coil	AE	C231	VCFYHA1HA104J			•	
<u> </u>	RCILF0007PEZ			AL	C232	VCEAGA1CW476M			16V Electrolytic 16V Electrolytic	
⚠ L702	RCiLF0087CEZ		Coil, Line Filter	AL	C233	VCEAGA1CW106M			16V Electrolytic	AA
⚠ L705	VP-CF3R3K000		Coil, 3.3 µH	AB	C234	VCKYMN1CY103N				
<u> </u>	RCILP0093CEZ		Peaking Coil	AE	C239	VCFYHA1HA104J			•	
<u> </u>	VP-CF330K000		Coil, 33μH	AB	C240	VCEAGA1AW108M			10V Electrolytic	
L731	VP-CF3R3K000		Coil, 3.3μH	AB	C242	VCKYMN1CY103N			16V Ceramic	AA
L732	VP-CF3R3K000		Coil, 3.3μH	AB	C244	VCCCPA1HH8R0D		•	50V Ceramic	AA
L733	RCILP0093CE			AE	C249	VCKYMN1CY103N			16V Ceramic	AA
L901	VP-XF8R2K000		Coil, 8.2μH	AB	C250	VCKYMN1CY103N			16V Ceramic	AA
L1001	VP-XF101K000		Coil, 100μH	AB	C251	VCEAGA1CW107M			16V Electrolytic	
L1002	VP-XF120K000	00 J	Coil, 12μΗ	AB	C252	VCKYMN1CY103N			16V Ceramic	AA
SF201	RFILC0203CE2	ZZJ	Surface Accoustic	AN	C259	VCKYMN1CY103N			16V Ceramic	AA
			Wave Filter		C269	VCKYMN1CY103N			16V Ceramic	AA
T203			S.A.W. Matching Trans.	AD	C301	VCKYMN1CY103N			16V Ceramic	AA
T205	RCILD0130CEZ		PIF Detector Coil	AD	C303	VCEAGA1HW475M			50V Electrolytic	
⚠ T 60 1	RTRNZ0179CEZ		Horiz. Drive Trans.	ΑE	C304	VCEAGA1HW225N			50V Electrolytic	
▲ <u>↑</u> T602	RTRNF0063PE		Flyback Trans. (F.B.T.)	BE	C307	VCEAGA1HW105N			50V Electrolytic	
			W/ Focus, Screen Control		C309	VCEAGA1EW475M				
	RTRNZ0041PE			AX	C311	VCKYPA2HB102K				AA
T1001	RCILBOOO4PE	ZZR	Sign Position Adj. Coil	AF	C312	VCEAGA1CW337M				
					C313	VCEAGA1HW104N			50V Electrolytic	
					C314	VCQYSH1HM332k				AA
					C315	VCKYMN1CY103N				AA
					C317	VCEAGA1HW105N			50V Electrolytic	
		NTRO			C319	VCKYD41CY103N				AA
R248	RVR-M4626GE			AB	C326	VCEAGA1HW225N			50V Electrolytic	
R420	RVR-M4626GE	ZZ J	10k(B) Sub-Contrast	AB	C327	VCKYPA1HB332k				AA
R509	RVR-M4616GE	ZZ J	220(B) Vertical Size	AB	C328	VCEAGA1CW477N			16V Electrolytic	
R613	RVR-M4626GE	ZZ J	10k(B) Horiz. Centre	AB	C329	VCKYMN1CY103N	l j	0.01	16V Ceramic	AA
<u> </u>	RVR-M4356GE	ZZ J	220(B) 115V Adj.	AB	C331	VCEAGA1AW476N			10V Electrolytic	
					C335	VCKYMN1CY103N			16V Ceramic	AA
					C337	VCKYMN1CY103N			16V Ceramic	AA
					C338	VCKYMN1CY103			16V Ceramic	AA
					C347	VCEAGA1AW107N			10V Electrolyti	
					C404	VCFYHA1HA473.				
					C405	VCEAGA1HW105N			50V Electrolyti	
					C406	VCFYHA1HA473.))	0.047	7 50V M. Polyest	er AB

▲MARK: X-RAY RELATED PARTS.

Ref. No. Part No. Description Code Ref. No. Part No. Description Code **DUNTK7911WEV0** CAPACITORS (Continued) PWB-A VCKYMN1CX472N J 4700p16V Ceramic ΔΔ C649 **MOTHER UNIT (Continued)** AB 50V Elect. (N.P) C650 VCE9AA1HW105M J 1 50V M. Polyester AB **CAPACITORS (Continued) C657** VCFYHA1HA104J J 0.1 AF C407 VCKYMN1CY103N J 0.01 16V Ceramic **Л** C701 RC-FZ0078CEZZ J 0.47 AC250V Special AA RC-KZ0029CEZZ J 0.01 AC250V Ceramic AC C408 VCEAGA1CW106M J 10 16V Electrolytic AA **⚠** C702 RC-KZ0029CEZZ J 0.01 AC250V Ceramic AC C421 VCKYMN1HB101K J 100p 50V Ceramic AΑ **⚠** C703 **C**704 RC-KZ0029CEZZ J 0.01 AC250V Ceramic AC C439 VCCSPA1HL181J J 180p 50V Ceramic AA VCKYPA1HB471K J 470p 50V RC-KZ0029CEZZ J 0.01 AC250V Ceramic AC C502 **Л** C705 Ceramic ΔΔ RC-KZ0029CEZZ J 0.01 AC250V Ceramic AC C503 **⚠** C706 VCQYSH1HM272K J 2700p50V Mylar AA RC-EZ0285CEZZ J 330 400V Electrolytic AR C504 VCKYMN1HB102K J 1000p50V Ceramic AA ▲ C707 ΔC C505 VCFYHA1HA104J J 0.1 50V M. Polyester AB **⚠** C708 RC-KZ0029CEZZ J 0.01 AC250V Ceramic VCEAGA1EW107M J 100 25V Electrolytic AD C506 VCEAGA1EW108M J 1000 25V Electrolytic **⚠** C709 C507 VCEAGA1EW227M J 220 25V Electrolytic AC **/**\ C710 VCKYPA2HB102K J 1000p500V Ceramic AA AC **C711** VCCSPA1HL471J J 470p 50V Ceramic ΔΔ C508 VCSATA1VE225K J 2.2 35V **Tantalum** VCFYHA1HA474J J 0.47 50V M. Polyester AD C509 VCFYHA1HA104J J 0.1 50V M. Polyester AB **⚠** C712 VCEAGA1VW477M J 470 **⚠** C713 VCKYPA2HB102K J 1000p500V Ceramic C510 35V Electrolytic AD VCQYSH1HM563K J 0.056 50V M. Polyester AB C511 VCKYPA2HB102K J 1000p500V Ceramic **C**714 **Л** C715 VCEAGA1HW105M J 1 50V Electrolytic C512 VCEAGA1HW474M J 0.47 50V Electrolytic AA 50V Electrolytic ΔC **/\ C716** VCEAGA1HW105M J 1 C513 VCEAGA1HW105M J 1 50V Electrolytic VCQPSC2JA333K J 0.033 630V Polypro Film AB C514 VCSATA1VE104K J 0.1 35V Tantaium AC **⚠** C717 VCQYSH1HM472K J 4700p50V **⚠** C718 VCKYPH3DB561K J 560p 2kV Ceramic AC C515 AA C518 VCKYPA1HB102K J 1000p50V Ceramic AA **⚠** C719 VCQYSH1HM273K J 0.027 50V Mylar AB C551 VCEAGA1HW474M J 0.47 50V Electrolytic AA **⚠** C720 VCEAGA1JW476M J 47 63V Electrolytic AB AC VCQYSH1HM152K J 1500p50V **Λ** C721 RC-KZ0024CEZZ J 1000p2kV Ceramic C552 Mylar ΔΔ AA **⚠** C723 VCKYPA2HB102K J 1000p500V Ceramic C553 VCQYSH1HM333K J 0.033 50V Mylar AB AC C554 VCKYMN1CY103N J 0.01 **⚠** C724 RC-KZ0029CEZZ J 0.01 AC250V Ceramic 16V Ceramic AA C555 VCQYSH1HM333K J: 0.033 50V Mylar AB **⚠** C725 VCFYHA1HA474J J 0.47 50V M. Polyester AD **⚠** C726 VCKYPA1HB331K J 330p 50V Ceramic C556 VCEAGA1HW105M J 1 50V Electrolytic C601 VCEAGA1EW477M J 470 25V Electrolytic AD VCFYHA1HA334J J 0.33 50V M. Polyester AC **⚠** C729 AD ▲ C602 VCFYHA1HA104J J 0.1 50V M. Polyester AB **⚠** C730 RC-KZ0128CEZZ J 2200p4kV Ceramic VCEAGH2CW107M J 100 160V Electrolytic AE C606 VCQYSH1HM103K J 0.01 50V Mylar C731 C610 VCFYSB2EB823J J 0.082 250V M. Polyester AD C732 RC-KZ0024CEZZ J 1000p2kV Ceramic AC VCKYPA2HB102K J 1000p500V Ceramic ΔΔ C611 VCKYPA2HB102K J 1000p500V Ceramic C733 AD ▲ C612 RC-KZ0038CEZZ J 470p 2kV Ceramic AB C734 VCEAGA1EW477M J 470 25V Electrolytic C613 VCFPPD2DB334J J 0.33 200V M. Polyester AF C737 VCEAGH2CW107M J 100 160V Electrolytic C614 VCOPSC2DA104J J 0.1 200V Polypro Film AC **Λ** C741 VCKYPA2HB472K J 4700p500V Ceramic 50V M. Polyester AD C615 VCQPSD2DA224J J 0.22 200V Polypro Film AD **Λ** C742 VCFYHA1HA474J J 0.47 ΑΑ **▲** C616 VCFPPD3CA682H J 6800p 1.6kV Polypro Film AE C811 50V VCQYSH1HM103K J 0.01 Mylar AA C617 VCFYHA1HA104J J 0.1 50V M. Polyester AB C812 VCQYSH1HM103K J 0.01 50V Mylar C619 VCEAGA2AW106M J 10 100V Electrolytic AC C813 VCKYPA1HF103Z J 0.01 50V Ceramic ΔΔ **∆** C620 VCEAGA1HW105M J 1 C814 AB 50V Electrolytic AC VCEAGA1HW225M J 2.2 50V Electrolytic **⚠** C621 VCEAGA0JW337M J 330 6.3V Electrolytic AB C815 VCEAGA1HW475M J 4.7 50V Electrolytic **∆** C622 VCEAGA1CW476M J 47 16V Electrolytic AB C817 VCFYHA1HA104J J 0.1 50V M. Polyester AB C623 VCKYMN1HB471K J 470p 50V Ceramic AA C818 VCFYHA1HA104J J 0.1 50V M. Polyester AB C628 VCKYPA2HB221K J 220p 500V Ceramic AA C819 VCCCMN1HH180J J 18p 50V Ceramic AA **∆** C630 VCKYMN1CY103N J 0.01 16V Ceramic C820 VCCCMN1HH180J J 18p 50V Ceramic AA **⚠** C635 VCEAGA1CW476M J 47 C821 VCKYPA1HB472K J 4700p50V AA 16V Electrolytic AB Ceramic C636 VCEAGA1CW476M J 47 Electrolytic ΑB C822 AA 16V VCEAGA1HW104M J 0.1 50V Electrolytic C637 VCEAGA1CW476M J 47 10V Electrolytic AB C823 VCEAGA1AW476M J 47 10V Electrolytic AA C638 VCKYMN1CY103N J 0.01 16V C825 AA Ceramic AA VCKYMN1HB102K J 1000p50V Ceramic C639 VCKYD41HB101K J 100p 50V Ceramic AA C826 VCKYPA1HB102K J 1000p50V Ceramic AA C642 VCKYPA1HF103Z J 0.01 50V Ceramic AA C827 VCKYMN1CY103N J 0.01 AA 16V Ceramic C647 VCEAGA1HW335M J 3.3 50V ΑB C829 50V AA Electrolytic VCCSMN1HL560J J 56p Ceramic C648 VCEAGA1AW227M J 220 10V Electrolytic AB C830 AA VCCSD41HL560J J 56p 50V Ceramic

ef. No.	Part No.	*		escri	ption C	ode	Ref. No.	Part No.	*		Description	Code
PWE	B-A DUNTK	79	11W	/EV	0			RES	ISTO	RS	•	
	MOTHER						R202	VRD-MN2BE56				AA
	WOTHER	U	411 /		tillueu)		. R203	VRD-MN2BE39	2 J J	3.9	k 1/8W Carbon	AA
	CAPACITORS	(C	ontin	ued))		R204	VRD-MN2BE22				AA
C831	VCCSMN1HL560J	J	56p	50V	Ceramic	AA	R205	VRD-MN2BE15				. AA
C836	VCCSPA1HL390J	j	39p	50V	Ceramic	AA	R206	VRD-MN2BE33	2 J J	3.3	3k 1/8W Carbon	AA
C840	VCEAGA1CW106M	j	10	16V	Electrolytic	AA	R207	VRD-RA2EE22			0 1/4W Carbon	AA
C901	VCKYMN1CY103N	j	0.01	16V	Ceramic	AA	R208	VRD-MN2BE10				AA
C902	VCEAGA1CW476M	J	47	16V	Electrolytic	AB	R209	VRD-MN2BE15	ן נו			AA
C903	VCFYHA1HA104J	J	0.1	50V	M. Polyester	ΑB	R210	VRD-MN2BE56			0 1/8W Carbon	AA
C904	VCFYHA1HA224J	J	0.22	50V	M. Polyester	AC	R211	VRD-MN2BE56		-	0 1/8W Carbon	AA
C909	VCCCPA1HH680	j	68p	50V	Ceramic	AA	R212	VRD-RA2BE10				AA
C1001	VCEAGA1HW225M	J	2.2	50V	Electrolytic	AB	R214	VRD-RM2HD22				AA
C1002	VCEAGA1HW225M	J	2.2	50V	Electrolytic	/ AB	R215	VRD-MN2BE68				AA
C1003	VCEAGA1HW225M	J	2.2	50V	Electrolytic	AB	R217	VRD-RA2BE82				AA
C1004	VCEAGA1HW475N	J	4.7	50V	Electrolytic	AB	R218	VRD-RA2BE56	1 J J	56	0 1/8W Carbon	AA
C1005	VCEAGA0JW337N	J	330	6.3V	Electrolytic	AB	R223	VRD-RA2BE10				AA
C1007	VCFYHA1HA104J	J	0.1	50V	M. Polyester	AB	R224	VRD-RA2BE82				AA
C1008	VCFYHA1HA104J	j	0.1	50V	M. Polyester	AB	R225	VRD-MN2BE22				AA
C1009	VCKYMN1HB101K	j	100p	50V	Ceramic	AA	R230	VRD-RA2BE15				AA
C1011	VCKYMN1HB101K				Ceramic	AA	R232	VRD-RA2EE68	1 J	68	0 1/4W Carbon	AA
C1013	VCEAGA1HW106N	J	10	50V	Electrolytic	AC	R233	VRD-MN2BE47	4 j	47	0k1/8W Carbon	AA
C1015	VCKYMN1CY103N	j	0.01	16V	Ceramic	AA	R234	VRD-RA2BE39	3 J J	39	k 1/8W Carbon	AA
C1016	VCEAGA1HW335M			50V	Electrolytic	ΑВ	R236	VRD-MN2BE47	2 J J	4.	7k 1/8W Carbon	AA
C1017				10V		AC	R237	VRD-MN2BE47	2 J J	4.	7k 1/8W Carbon	AA
C1020	VCKYMN1HB101k				•	AA	R238	VRD-MN2BE47	2 J J	4.	7k 1/8W Carbon	AA
C1021	VCKYMN1HB101k					AA	R240	VRD-MN2BE10				AA
C1022	VCEAGA1CW226N			16V			R241	VRD-MN2BE68				AA
C1022	VCKYMN1HB151k				•	AA	R242	VRD-MN2BE39				AA
C1023						AA	R244	VRD-MN2BE39				AA
C1024						. AA	R247	VRD-MN2BE12				AA
C1025						AA	R248	See Controls	•••			
C1026					Ceramic	AA	R250	VRD-MN2BE15	31 1	15	sk 1/8W Carbon	AA
					Ceramic	AA	R251	VRD-RA2BE15				AA
C1028						AA	R252	VRD-MN2BE22				AA
C1030							R254	VRD-MN2BE33				AA
	VCFYHA1HA104							VRD-MN2BE47				AA
	VCKYMN1HB471					AA	R255					AA
	VCKYMN1HB221I					AA	R256	VRD-MN2BE10				AA
	VCEAGA1AW107N						R260	VRD-RM2HD15				AA
C1042	VCKYD41HB101	< 1	100k	50V	Ceramic	AB	R263	VRD-MN2BE47				AA
							R277	VRD-MN2BE12				
							R301	VRD-MN2BE10				AA
							R302	VRD-MN2BE47				AA
							R306	VRD-MN2BE10				AA
							R308	VRD-MN2BE10				AA
							R309	VRD-RA2BE47				AA
							<u></u>				1/4W Fuse Resis	
							R315	VRD-RA2BE82				AA
							R316	VRD-MN2BE82				AA
							R317	VRD-MN2BE10				AA
							⚠ R318	VRD-MN2BE68	32J .	6	.8k 1/8W Carbon	AA
							 ₹ R319	VRD-RA2BE10				AA
							R320	VRD-MN2BE8	22].	8	.2k 1/8W Carbon	AA
							R321	VRD-MN2BE1				AA
							R323	VRD-RA2BE1	. ر 2 0	1	k 1/8W Carbon	AA

Ref. No.		Part No.	*	Desc	ription	Code	Ref. No.	Part No.	*	Description	Code
PWE	B-A	DUNTK7	79	11WE\	/0			RESISTORS ((Cc	ontinued)	
		MOTHER	U	NIT (Coi	ntinued)		R613	See Controls			
							. R614	VRD-MN2BE824J			AA
		RESISTORS (-	•			R616	VRD-RA2BE104J			AA
R327		-RV3AB8R2J		-	_	AB	R618			1k 1/2W Metal Oxide	AA
R332		-RA2BE103J				AA	R619	VRD-MN2BE183J			AA
R335		-MN2BE102J				AA	<u></u> ₹ R620	RR-XZ0035TAZZ			
R337		-MN2BE102J			Carbon	AA	▲ R621	VRN-RV3AB1R2J	j	1.2 1W Metal Film	AB
R338	VRD	-RA2BE472J	J	4.7k 1/8W	Carbon	AA	R622	VRD-RM2HD223J	J	22k 1/2W Carbon	AA
R340	VRD-	-MN2BE103J	j	10k 1/8W	Carbon	AA	⚠ R623	VRD-RA2EE125J	J	1.2M1/4W Carbon	AA
R341	VRD.	-MN2BE472J	j	4.7k 1/8W	Carbon	AA	⚠ R624	VRD-MN2BE274J	j	270k 1/8W Carbon	AA
R345	VRD	-RA2BE223J	j	22k 1/8W	Carbon	AA	R625	VRD-MN2BE104J	J	100k 1/8W Carbon	AA
R347	VRD	-RA2BE101J	J	100 1/8W	Carbon	AA	R626	VRD-MN2BE103J	J	10k 1/8W Carbon	AA
R348	VRD	-RA2BE223J	J	22k 1/8W	Carbon	AA	R627	VRD-RA2BE151J	J	150 1/8W Carbon	AA
R349	VRD	-RA2BE392J	J	3.9k 1/8W	Carbon	AA	 ₹ R628	VRD-MN2BE223J	J	22k 1/8W Carbon	AA
R400	VRD-	-MN2BE103J	j	10k 1/8W	Carbon	AA	 ₹ £ £ £ £ £ £ £ £ £ £	VRD-MN2BE123J	J	12k 1/8W Carbon	AA
R401	VRD	-RA2EE820J	j	82 1/4W	Carbon	AA	⚠ R630	VRD-MN2BE472J	j	4.7k 1/8W Carbon	AA
R410	VRD-	-MN2BE153J	j	15k 1/8W	Carbon	AA	▲ R634	VRD-RM2HD220J	J	22 1/2W Carbon	AA
R411	VRD-	-MN2BE223J	j	22k 1/8W	Carbon	AA	. ▲ <u> </u>	VRD-MN2BE223J	J	22k 1/8W Carbon	AA
R412	VRD	-RA2BE333J	j	33k 1/8W	Carbon	AA	∕N R636	VRD-RA2BE472J	J	4.7k 1/8W Carbon	AA
R414	VRD-	-RA2BE223J	j	22k 1/8W	Carbon	AA		VRD-MN2BE472J	J	4.7k 1/8W Carbon	AA
R420	Se	e Controls					R640	VRD-RM2HD682J	j	6.8k 1/2W Carbon	AA
R422		-MN2BE823J	J	82k 1/8W	Carbon	AA	R641	VRD-RA2BE273J			AA
R437		-MN2BE683J				AA	R642	VRD-RM2HD222J			AA
R444		-RA2BE681J				AA	R648	VRD-RM2HD1R5J			AA
R447		-RA2BE681J				AA	∕\ R649	VRD-MN2BE472J			AA
R504		MN2BE221J				AA	R650	VRD-RA2BE332J			AA
R505		-RA2BE223J				AA	R651	VRD-RA2BE101J			AA
R506		-MN2BE392J				AA	R653	VRD-MN2BE101J			AA
R508		-MN2BE123J	•			AA	R654	VRD-MN2BE153J			AA
R509			,	12K 1/QVV	Carbon	AA		VRD-RA2BE391J			
R510		e Controls RM2HD1R8J		1.0 1/3\4/	Caubaa		R659		-		AA
R510		-RA2BE822J				AA	R671	VRD-RA2BE332J	-		AA
						AA	R672	VRD-RAZEE820J			AA
R512		-MN2BE472J		_		AA	R674			5.6k 1W Metal Oxide	AA
R513		-RA2BE152J				AA	R682	VRD-RA2BE222J			AA
⚠ R515		ZOO35TAZZ					R683	VRD-RA2BE122J			AA
R516		RM2HD331J				AA	<u> </u>	VRW-KQ4AC2R7K			ΑE
R519		-MN2BE561J				AA	<u> </u>	VRW-KV3HC1R8K			AC
R520		-RAZEE275J				AA	<u> </u>	RR-WZ0151CEZZ			AD
⚠ R521		Z0029CEZZ					<u> </u>			15 2W Metal Oxide	AA
R522		-MN2BE102J				AA	<u> </u>	VRD-RM2HD2R2J			AA
R525		-MN2BE681J				AA	<u> </u>	VRD-RA2BE394J			AA
R526		-RA2EE123J				AA	<u> </u>	VRD-RA2BE390J			AA
R527		-RA2EE155J				AA	<u></u> ₹708			120k3W Metal Oxide	AC
R552	VRD	-RAZEE122J	J	1.2k 1/4W	Carbon	AA	<u> </u>	VRD-RA2BE392G	J	3.9k 1/8W Carbon	AA
R553	VRD.	-MN2BE184J	J	180k 1/8W	Carbon	AA	⚠ R711	See Controls			
R554	VRD	-RA2BE471J	j	470 1/8W	Carbon	AA	 ₹ R712	VRD-RA2BE821J	J	820 1/8W Carbon	AA
R555	VRD-	-MN2BE562J	j	5.6k 1/8W	Carbon	AA	⚠ R713	VRD-RA2EE225J	j	2.2M1/4W Carbon	AA
R556	VRD	-MN2BE223J	J	22k 1/8W	Carbon	AA	 ₹714	VRD-RA2BE184J	j	180k 1 /8W Carbon	AA
R557	VRD	-RA2BE224J	j	220k 1/8W	Carbon	AA	⚠ R715	VRD-RA2BE682J	J	6.8k 1/8W Carbon	AA
R558	VRD	-RA2BE273J	j	27k 1/8W	Carbon	AA	 ₹ R716	VRD-RA2EE180J			ΑÀ
R608	VRD-	RM2HD392J	J	3.9k 1/2W	Carbon	AA	⚠ R717	VRD-RA2BE101J			AA
R609	VRS-	-SV3LB472J	j	4.7k 3W	Metal Oxide	AC	⚠ R718			0.22 1W Metal Film	AA
▲ R611		-KV3NC100K				AC	⚠ R719	VRC-UA2HG825K			AA
 R612		(Z0073CEZZ					⚠ R720	VRC-UA2HG825K			AA
									-		

Ref. No.

Part No.

Code Description PWB-A **DUNTK7911WEV0 RESISTORS (Continued)** R1032 VRS-VV3DB123J J 12k 2W Metal Oxide AA **MOTHER UNIT (Continued)** VRD-RA2BE682J J 6.8k 1/8W Carbon R1033 AA **RESISTORS (Continued)** VRD-RA2BE271J J 270 1/8W Carbon R1034 AΑ **⚠** R721 VRD-RM2HD1R0J J 1 1/2W Carbon AΑ R1035 VRD-RA2BE101J J 100 1/8W Carbon AΑ VRS-SV3LB272JJ 2.7k 3W Metal Oxide VRD-RA2BE102J J 1k **⚠** R723 AD R1036 1/8W Carbon AA **₹ R724** VRD-RA2BE102J J 1k 1/8W Carbon ΔΔ R1039 VRD-MN2BE153J J 15k 1/8W Carbon AA RR-XZ0016CEZZ J 1 VRD-MN2BE123J J 12k 1/8W Carbon **⚠** R731 1/2W Fuse Resistor AB R1040 ΔΔ **⚠** R735 VRD-RM2HD184J J 180k1/2W Carbon AA R1041 VRD-MN2BE103J J 10k 1/8W Carbon AA AΑ **⚠** R736 VRD-RM2HD184J J 180k1/2W Carbon ΑΑ R1042 VRD-MN2BE333J J 33k 1/8W Carbon R807 VRD-MN2BE103J J 10k 1/8W Carbon AA R1044 VRD-MN2BE103J J 10k 1/8W Carbon AA R809 VRD-RA2BE271J J 270 1/8W Carbon VRD-MN2BE101J J 100 1/8W Carbon AΑ AA R1045 VRD-MN2BE123J J 12k 1/8W Carbon R811 VRD-MN2BE271J J 270 1/8W Carbon AA R1046 ΔΑ R812 VRD-MN2BE271J J 270 1/8W Carbon AA R1048 VRD-MN2BE102J J 1k 1/8W Carbon AA R816 VRD-MN2BE102J J 1k 1/8W Carbon AΑ R1049 VRD-MN2BE682J J 6.8k 1/8W Carbon AA R817 VRD-MN2BE471J J 470 1/8W Carbon R1050 VRD-RA2BE102J J 1k 1/8W Carbon AA AA AA **R818** VRD-MN2BE471J J 470 1/8W Carbon R1051 VRD-MN2BE182J J 1.8k 1/8W Carbon ΔΔ R825 VRD-MN2BE333J J 33k 1/8W Carbon AA R1052 VRD-MN2BE332J J 3.3k 1/8W Carbon AA VRD-RA2BE683J J 68k 1/8W Carbon VRD-MN2BE332J J 3.3k 1/8W Carbon AA R828 AA R1053 R829 VRD-MN2BE104J J 100k1/8W Carbon AΑ R1054 VRD-MN2BE153J J 15k 1/8W Carbon AA R832 VRD-MN2BE271J J 270 1/8W Carbon VRD-MN2BE683J J 68k 1/8W Carbon AA AA R1055 **R833** VRD-MN2BE2231 1 22k 1/8W Carbon VRD-MN2BE1531 J 15k 1/8W Carbon ΔΔ AA R1056 R837 VRD-MN2BE102J J 1k 1/8W Carbon R1057 VRD-RA2BE472J J 4.7k 1/8W Carbon AA AΑ **R838** VRD-MN2BE102J J 1k 1/8W Carbon AA R1060 VRD-RA2EE331J J 330 1/4W Carbon AΑ R839 VRD-MN2BE102J J 1k VRD-RA2EE181J J 180 1/4W Carbon AA 1/8W Carbon AA R1061 R840 VRD-MN2BE561J J 560 1/8W Carbon VRD-RA2EE681J J 680 1/4W Carbon AA AA R1062 R841 VRD-MN2BE561J J 560 1/8W Carbon AΑ R1064 VRD-MN2BE123J J 12k 1/8W Carbon AΑ R842 VRD-MN2BE561J J 560 1/8W Carbon AA R1065 VRD-RA2BE6831 J 68k 1/8W Carbon AA R843 VRD-MN2BE103J J 10k 1/8W Carbon VRD-RA2BE682J J 6.8k 1/8W Carbon AA AA R1066 R844 VRD-RA2EE681J J 680 1/4W Carbon VRD-RA2EE821J J 820 1/4W Carbon AA ΔΔ R1067 R849 VRD-MN2BE183J J 18k 1/8W Carbon AΑ R1068 VRD-RA2EE270J J 27 1/4W Carbon AA R891 VRD-RA2BE122J J 1.2k 1/8W Carbon R1069 VRD-RA2EE331J J 330 1/4W Carbon AA AΑ R902 VRD-RA2BE101J J 100 1/8W Carbon AA R1072 VRD-MN2BE223J J 22k 1/8W Carbon AA R909 VRD-MN2BE562J J 5.6k 1/8W Carbon VRD-RA2BE102J J 1k 1/8W Carbon AA AA R1073 R1005 VRD-MN2BE392J J 3.9k 1/8W Carbon ΔΔ R1074 VRD-RA2BE472J J 4.7k 1/8W Carbon AA R1006 VRD-MN2BE123J J 12k 1/8W Carbon AA R1078 VRD-RA2BE101J J 100 1/8W Carbon AA R1007 VRD-MN2BE822J J 8.2k 1/8W Carbon ΔΔ R1079 VRD-RA2BE1011 1 100 1/8W Carbon AA R1008 VRD-MN2BE101J J 100 1/8W Carbon VRD-MN2BE103J J 10k 1/8W Carbon AA AA R1080 R1009 VRD-MN2BE472J J 4.7k 1/8W Carbon VRD-MN2BE103J J 10k 1/8W Carbon AA ΔΔ R1081 R1010 VRD-MN2BE472J J 4.7k 1/8W Carbon AA R1011 VRD-MN2BE472J J 4.7k 1/8W Carbon AA R1012 VRD-MN2BE2231 1 22k 1/8W Carbon ΑΑ R1014 VRD-MN2BE392J J 3.9k 1/8W Carbon AA **SWITCHES** R1015 VRD-RA2BE103J J 10k 1/8W Carbon AA R1016 VRD-MN2BE392J J 3.9k 1/8W Carbon AΑ **⚠** S701 QSW-P0418CEZZ J Power ΑK ΑB R1017 VRD-MN2BE223J J 22k 1/8W Carbon AΑ **⚠** \$1001 QSW-K0068CEZZ J Channel(+) R1019 VRD-MN2BE101J J 100 1/8W Carbon OSW-K0068CEZZ J Channel(-) AB ΔΑ **₼ S1002** ΑB R1020 VRD-MN2BE1011 J 100 1/8W Carbon ΔΔ **∕**\ \$1003 OSW-K0068CEZZ J Volume(+) R1021 VRD-RA2BE101J J 100 1/8W Carbon AB AA **↑ 1004** QSW-K0068CEZZ J Volume(-) R1022 VRD-RA2BE101J J 100 1/8W Carbon AA **⚠** S1005 QSW-K0068CEZZ J P-Mode ΔB R1026 VRD-MN2BE333J J 33k 1/8W Carbon AA **1 €** \$1006 QSW-K0068CEZZ J Pre-Set ΑB R1028 VRD-MN2BE684J J 680k 1/8W Carbon AA **♦ \$1007** QSW-K0068CEZZ J Skip ΑB R1029 VRD-RA2BE333J J 33k 1/8W Carbon AA R1030 VRD-RA2BE333J J 33k 1/8W Carbon ΔΔ R1031 VRD-RA2BE153J J 15k 1/8W Carbon AA

Ref. No.

Part No.

Description

Code

Ref. No.	Part No.	*	Description	Code	Ref. No.		Part No.	*	Description	Code
PWE			11WEV0 NIT (Continued))	PWE	3-B	DUNTK(51WEZ3 T UNIT	
	MISCELLAN	IFΩ	IIS PARTS				TRANS	IST	ORS	
FB602	RBLN-0010CEZZ			AC	Q851	V S 2 S	C22290/1E			AD
FB603	RBLN-0018CEZZ			AB	Q852		C22290/1E			AD
⚠ FB702	RBLN-0037CEZZ			AB	Q853		C22290/1E			AD
⚠ FH701	QFSHD1009CEZZ			AA	Q854	VS2S	A1015Y/1E	J	2SA1015(Y)	AC
	QFSHD1010CEZZ			AA						
⚠ F701	QFS-C3224CEZZ		Fuse, T3.15A	AD						
 ∆ J451	QJAKH0007CEZ	ZJ	Jack, AV In/Out	AL						
P301	QPLGN0241CEZ	Ζj	Plug 2-pin, (S)	AA			DIC			
P401	QPLGN0641CEZ	ΖJ	Plug 6-pin, (YI)	AB	D851	VHD	1 S S 1 1 9 // 1 E	j	1SS11 9	AA
P402	QPLGN0441CEZ	Ζj	Plug 4-pin, (VA)	AB						
P502	QPLGN0505CEZ	ΖJ	Plug 5-pin, (F)	AB						
P602	QPLGN0441CEZ		Plug 4-pin, (H)	AB			-	.		
⚠ P711	QPLGN0207CEZ		Plug 2-pin, (G)	AA				DIL		A D
⚠ P712	QPLGN0304CEZ		Plug 3-pin, (A)	AB	L851	VP-C	F681K0000	J	680 <i>μ</i> Η	AB
P801	QPLGN0541CEZ		Plug 5-pin, (K)	AB						
RMC1001	RRMCU0195CEZZ	<u> </u>	Remote Control	AK						
	LHLDP1017PE0	A B	Receiver	AB			CON	rr(אוכ	
	LHLDP101/PEU	UK	LED Holder	Ab	R853	RVR.			10k(B) Red Bias	AC
					R857		B4564CEZZ			AC
					R859				10k(B) Green Bias	AC
					R863		B4564CEZZ			AC
					R865	RVR-	B4568CEZZ	J	10k(B) Blue Bias	AC
								- :-		
							CAPA			
					C851			-	390p 50V Ceramic	
					C852				330p 50V Ceramic	
					C853 C854		YPA1HB391K (Z015JCEZZ			
					C855		GA2DW106M			
					C860				0.01 16V Ceramic	
					C861		GA1CW106M			
					C866				120p 500V Ceramic	
					C870		GA1CW476M			
							RESI			4.
					R851				1.2k 1/8W Carbon	AA
					R852			j	2.7k 1/8W Carbon	AA
					R853	_	ee Controls		2 76 1/2\A/ Carban	AA
					R855				2.7k 1/2W Carbon 680 1/8W Carbon	AA
					R856 R857		ee Controls	ا د	DOD 1/OAA CALDOU	~~
					R858			, ,	2.7k 1/8W Carbon	AA
					R859		ee Controls	, ,	2./K I/OTT Calbull	
					R860			, ,	12k 1W Metal Ox	ide AA
					R861				2.7k 1/2W Carbon	AA
					R862				560 1/8W Carbon	AA
		_	- End of PWB-A							

Ref. No.	Part No.	*	Description	Code	Ref. No.	Part No.	*	Descr	iption (Code
PWB			1WEZ3 UNIT (Continu	ed)	PWB-	_ •		94WEV		
	RESISTORS	(Con	tinued)			INTEGR	RATED	CIRCUIT		
R863	See Controls				IC2301 R	H-iX0776C	EZZ J	5.5MHz Co	nverter	AN
R864	VRD-RA2BE272	J J 2	.7k 1/8W Carbon	AA						
R865	See Controls		a.							
R866 R867	VRD-RM2HD272J		2k 1W Metal Oxide			TDA	NSIST	rops		
R868			./k 1/2vv Carbon 2k 1W Metal Oxide	AA ^^	O2301 V	۳۳۰ (S2SA1015Y)			'\	AC
R872	VRD-RA2BE681			AA	· ·	S2SC945AP		•	-	AB
R873	VRD-RA2BE681			AA	4	01000,707		2505 157-(1	,	
R874	VRD-RA2BE681			AA						
R878	VRD-RA2BE821	3 L L	20 1/8W Carbon	AA		1	DIODE	S		
R879	VRD-RA2BE822	J J 8.	.2k 1/8W Carbon	AA	D2303 V	HD1SS119/	/1E J	155119		AA
R880	VRD-RA2BE101	J J 10	00 1/8W Carbon	AA	D2304 V	HD155119/	/1E J	155119		AA
R881	VRD-RA2BE122	J J 1.	.2k 1/8W Carbon	AA	D2305 V	'HD1SS119/	/1E J	155119		AA
	MICCELLAN		· DADE					_		
D0E1	MISCELLAN			4.5	653304 8	5:1 4 0 0 0 0 0 0	COILS	-	40.00	
P851 P852	QPLGN0361CEZZ			AB AB		FiLA0023C			•	AF
∆ SC851	QSOCV0829CEZ			AK		FiLA0024CE FiLA0025CE				AF
₩ 2693,	Q30CVV0Z3CZZ	_ , _	NI JOCKET	AK		FiLC0144CE			-	
						FiLC0145CE			-	AE
						FILCOOO1A				
					CF2307 R	FiLC0001AJ	IZZ J	Ceramic Fil	ter, 4.5 MHz	AD
					L2301 V	P-DF180K00)00 J	Coil, 18μH		AB
					L2303 V	P-DF8R2K00	000 1	Coil, 8.2μH		AB
					L2304 V	'P-DF6R8K0(000 1	Coil, 6.8µH		AB
						CA	PACIT	ORS		
					C2301 V	CCCPA1HH4			Ceramic	AA
						CCCPA1HH1		•		AA
	•				C2303 V	CCCPA1HH1	01J J	100p 50V	Ceramic	AA
					C2304 V	CFYHA1HA6	83J J	0.068 50V	M. Polyester	AB
					C2305 V	CCCPA1HH3	301 1	33p 50V	Ceramic	AA
						CQYSH1HM10		•	Mylar	AA
						CQYSH1HM10			Mylar	AA
						CQYSH1HM1			•	AA
						CQYSH1HM1		•	Mylar	AA
						CEAGA1HW10 CFYHA1HA8			Electrolytic M. Polyester	
						CEAGA1HW10			Electrolytic	
	•					CEAGATHW10				
						CCCPA1HH1			•	AA
						CCCPA1HH1		•		AA
						CCCPA1HH4		•	Ceramic	AA
			Fad at Disco o			CEAGA1CW10		•	Electrolytic	AB
•		-	End of PWB-B —		C2319 V	CKYD41CY10)3N J	0.01 16V	Ceramic	AA
				·····	C2320 V	CKYD41CY10)3N J	0.01 16V	Ceramic	AA
P\	WB-C	- No	ot Used ——							

Description Code Ref. No. Part No. Code Ref. No. Part No. Description **DUNTK7926WEV0** PWB-D DUNTK7494WEV2 PWB-E **AV UNIT** SIF CONVERTER UNIT (Continued) INTEGRATED CIRCUITS RESISTORS VHITA7348P/-1 J Audio Output AK IC351 R2301 VRD-RA2BE102J J 1k 1/8W Carbon AA VHITA7348P/-1 J Video Output ΔK R2302 VRD-RA2BE102J J 1k 1/8W Carbon AA R2303 VRD-RA2BE101J J 100 1/8W Carbon AA VRD-RA2BE331J J 330 1/8W Carbon AA R2304 R2305 VRD-RA2BE333J J 33k 1/8W Carbon AA **TRANSISTORS** R2306 VRD-RA2BE332J J 3.3k 1/8W Carbon AA VS2SC945AP/-1 J 2SC945A(P) ΑB 0351 R2307 VRD-RA2BE122J J 1.2k 1/8W Carbon ΔΔ VS2SC945AP/-1 J 2SC945A(P) AB 0352 R2309 VRD-RA2BE221J J 220 1/8W Carbon AA VS2SC945AP/-1 J 2\$C945A(P) ΑB 0353 R2310 VRD-RA2BE221J J 220 1/8W Carbon AA AB Q354 VS2SC945AP/-1 J 2SC945A(P) R2311 VRD-RA2EE105J J 1M 1/4W Carbon AA AΒ R2312 VRD-RA2BE332J J 3.3k 1/8W Carbon VS2SC945AP/-1 J 2SC945A(P) AA Q355 AB R2313 VRD-RA2BE103J J 10k 1/8W Carbon Q452 VS2SC945AP/-1 J 2SC945A(P) AA AB VS2SC945AP/-1 J 2SC945A(P) R2314 VRD-RA2BE103J J 10k 1/8W Carbon 0453 AA VS2SC945AP/-1 J 2SC945A(P) AB R2315 VRD-RA2EE105J J 1M 1/4W Carbon AΑ 0454 ΑB Q455 VS2SC945AP/-1 J 2SC945A(P) R2316 VRD-RA2EE105J J 1M 1/4W Carbon R2317 VRD-RA2BE331J J 330 1/8W Carbon ΔΔ R2318 VRD-RA2BE332J J 3.3k 1/8W Carbon ΔΑ R2319 VRD-RA2BE331J J 330 1/8W Carbon AA DIODES R2320 VRD-RA2EE105J J 1M 1/4W Carbon AA AA R2321 VRD-RA2EE105J J 1M 1/4W Carbon AA RH-EX0150GEZZ J Zener Diode, 8.2V R2322 VRD-RA2BE221J J 220 1/8W Carbon D354 RH-EX0150GEZZ J Zener Diode, 8.2V AA AA VHD1SS119//1E J 1SS119 AA D355 AΑ VHD1SS119//1E J 1SS119 D356 RH-EX0041TAZZ J Zener Diode, 9.1V AC D451 AC **MISCELLANEOUS PART** RH-EX0041TAZZ J Zener Diode, 9.1V D452 P2301 QPLGZ0707GEZZ J Plug 7-pin, (MC) AB COILS CF452 RFiLC0024CEZZ J Ceramic Filter, 6.5MHz ΑE AD CF453 RFiLC0002AJZZ J Ceramic Filter, 4.5MHz RFILC0150CEZZ J Ceramic Filter, 5.5/6.5MHz AF CF454 VP-XF150K0000 J Coil, 150μH AB L452 AB L453 VP-XF150K0000 J Coil, 150μH ΑB L454 VP-XF150K0000 J Coil, 150μH ΑB L455 VP-XF6R8K0000 J Coil, 6.8μH **CAPACITORS** C351 VCEAGA1CW106M J 10 16V Electrolytic AA 16V Elect. (N.P) AB C352 VCE9GA1CW106M J 10 AΑ 50V Ceramic C353 VCKYPA1HF103Z J 0.01 Electrolytic AC C354 VCEAGA1CW337M J 330 16V Electrolytic AA C355 VCEAGA1CW106M J 10 16V C356 VCE9GA1CW106M J 10 16V Elect. (N.P) ΑB 50V Ceramic AA C357 VCKYPA1HF103Z J 0.01 AB Electrolytic C358 VCEAGA1CW476M J 47 16V ΔΔ 50V C359 VCKYPA1HF103Z J 0.01 Ceramic AB C360 VCE9GA1CW106M J 10 16V Elect. (N.P) AA C361 VCKYPA1HF103Z J 0.01 50V Ceramic End of PWB-D

Ref. No.	Part No.	*	Description	Code	Ref. No.	Part No.	*		Description	Code
PWB	-E DUNTK	7026	SWEVO			RESISTORS	s (Ca	ntir	nued) -	
PVVD	-				R470	VRD-RA2BE103				AA
	AV UNIT	(Con	tinued)		R471	VRD-RA2BE101				AA
	CAPACITOR	S (Con	tinued)		R472	VRD-RA2BE101				AA
C362	VCEAGA1CW476N	-		: AB	R479	VRD-RM2HD100			1/2W Carbon	AA
C363	VCEAGA1EW475N			: AA	R480	VRD-RM2HD100	jj	10	1/2W Carbon	AA
C451	VCCSPA1HL331	J J 33	Op 50V Ceramic	AA	R482	VRD-RA2BE680	JJ	68	1/8W Carbon	AA
C452	VCCCPA1HH820	J J 82	p 50V Ceramic	AA						
C453	VCEAGA1CW107N	/ J 10	0 16V Electrolytic	: AB						
C454	VCKYPA1HF103	Z J 0.	01 50V Ceramic	AA						
C455	VCEAGA1CW106N	/ J 10	16V Electrolytic	C AA		MISCELLAI	NEO	US P	PARTS	
C456	VCE9GA1CW106	M J 10) 16V Elect. (N.P)	AB	P352	QPLGZ0507GEZ		-	•	AB
C457	VCE9GA1CW106	VI J 10		AB	P353	QPLGZ0407GEZ				AB
C459	VCKYPA1HF103			AA	P451	QPLGZ0641CEZ		_		AB
C460	VCKYPA1HF103	Z J 0.	01 50V Ceramic	AA	P452	QPLGZ0441CEZ	ZJ	Plug	g 4-pin, (VA)	AB
C461	VCEAGA1CW107	/I J 10	•							
C463	VCEAGA0JW477	M J 47	•							
C466	VCEAGA1CW106	VI J 10) 16V Electrolytic	c AB					•	
	RES	ISTOR	S							
R351	VRD-RA2BE124	IJ J: 13	20k1/8W Carbon	AA						
R352	VRD-RM2HD100	J J 10) 1/2W Carbon	AA						
R353	VRD-RA2BE474	IJ J 4	70k 1/8W Carbon	AA						
R354	VRD-RA2BE124	1J J 1:	20k 1/8W Carbon	AA						
R355	VRD-RA2BE332			AA			_		End of PWB-E	
R356	VRD-RA2BE102			AA						
R358	VRD-RA2BE101			AA						
R359	VRD-RA2BE10			AA		MISCELLAN	NEC)U :	S PARTS	
R361	VRD-RA2BE10			AA						
R362	VRD-RA2BE10			AA	CN301	QCNW-1240PE2	ZZR	Cor	necting Cord	AE
R363	VRD-RA2BE47			AA		QCNW-1455PE				AL
R364	VRD-RA2BE33		-	AA		QCNW-1456PE				AH
R365	VRD-RA2BE10			AA		QCNW-1341PE				AF
R366	VRD-RA2BE47			AA	CN852	QCNW-1342PE	ZZR	Cor	nnecting Cord	AF
R367	VRD-RA2BE10			AA	SP1	VSP0080P-G5Y	B R	Spe	aker, 8 cm, 32Ω	ΑN
R368	VRD-RA2BE10: VRD-RA2BE12:			AA AA		LHLDK0001PEZ	z R	AC	Cord Holder	AC
R369	VRD-RAZBETZ			AA	Δ	QACCZ3003PEZ	ZZR	AC	Cord	AQ
R371 R451	VRD-RAZBETS			AA						
R451	VRD-RA2BE39			AA						
R454	VRD-RA2BE39			AA						
R455	VRD-RA2BE27			AA						
R456	VRD-RA2BE22			AA						
R457	VRD-RA2BE68			AA						
R458	VRD-RA2BE27			AA						
R459	VRD-RA2BE18			AA						
R460	VRD-RA2BE10			AA						
R463	VRD-RA2BE27			AA						
R465	¥RD-RA2BE33			AA						
R466	VRD-RAZEE47			AA						
R467	¥RD-RA2BE10			AA						
R468	VRD-RM2HD22			AA						
R469	VRD-RA2EE68	011	58 1/4W Carbon	AA		p., 1 . f a a		114	NEOLIC DARTS	·
						End of M	SCE	LLA	NEOUS PARTS	

Ref. No. Part No. ★ Description Code Ref. No. Part No. ★ Description Code

PACKING PARTS (NOT REPLACEMENT ITEM)

SPAKC5779PEZZ	-	*	
		(Only for 14BN1)	
SPAKC5780PEZZ	-	Packing Case	_
		(Only for 14BN14)	
SPAKC5787PEZZ	-	Packing Case	_
		(Only for 14BN1A)	
SPAKFOO26PEZZ -	_	Packing Pad	
SPAKPOOS6PEZZ -	-	Polystyrene Mat	_
SPAKX0309PEZZ	_	Buffer Material	_
TLABK0001PEZZ -	_	Number Card	

SUPPLIED ACCESSORIES

ACCESSORIES											
QANTROO14PEZZ R	Rod Antenna AV										
QPLGA0011CEZZ J ACPlug Adapter AF											
QTANJ0005PEZZ J Antenna Plug, 300 – 75Ω A											
RRMCG0833PESA R	Infrared R/C Unit AX										
ACCESSORIES (NOT RE	PLACEMENT ITEM)										
TINS-5101PEZZ -	Operation Manual —										
	(Only for 14BN1, 14BN1A)										
TINS-5100PEZZ -	Operation Manual —										
	(Only for 14BN14)										
TMAPC3877PEZZ -	Service Map —										

Size AAA (2 pcs)

---- End of PACKING PARTS ----

— End of SUPPLIED ACCESSORIES —

End of PACKING PARTS -

SHARP 1-2 1-5 1-7 1-4 1-6 1-8

CABINET PARTS

UBATU1032CCN1 - Dry Batteries,

1	CCABA2136WEW6	R	Cabinet Ass'y, Front (Only for 14BN1)	ВС
1	CCABA2136WEW8	R	Cabinet Ass'y, Front (Only for 14BN14)	BE
1	CCABA2136WEX0	R	Cabinet Ass'y, Front (Only for 14BN1A)	BE
1-1	Not available	-	Cabinet, Front	
1-2	GLEGP9007PESA	R	Leg (Left)	AF
1-3	GLEGP9008PESA	R	Leg (Right)	ΑF
1-4	GMADT0093PESA	R	Window Cover (Only for 14BN1, 14BN1	AM 4)
1-4	GMADT0103PESA	R	Window Cover (Only for 14BN1A)	AM
1-5	HBDGB0010PESB	R	Badge, "SHARP"	AG
1-6	JBTN-0084PESA	R	Button, Power	AD
1-7	JBTN-0085PESA	R	Buttons, Ch./Vol.	AF
1-8	MSPRC0008PEFW	R	Spring, Power Button	AB
2	GCABB2140PEKA	R	Cabinet, Rear	ΑY

— End of CABINET PARTS ——